

## **ASCO® 5500 Series, Catalog A5510 Thin Web Server**

software version 5



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The ASCO 5500 Catalog A5510 *Thin Web Server* (TWS) provides real-time monitoring and control of ASCO Automatic Transfer Switches and engine-generator sets over the Internet or an Intranet. These precautions must be followed by all users:

**WARNING**

Be sure that *Users* to whom you give access are knowledgeable enough to have control of load transfer and of the generator.

**WARNING**

Verify that conditions are safe for load transfer before you transfer or retransfer an Automatic Transfer Switch (ATS).

**WARNING**

Fill in the *Communication Address Forms* in the back of this manual. Be sure that you enter correct information about each Automatic Transfer Switch and Power Manager and that address recorded on the *Communication Address Forms* corresponds with the address set in the ATS's Controller and Power Manager.





## Who Should Use this Installation Manual

This installation manual for the **Thin Web Server** should be used to assist individuals who will:

- install and connect the Thin Web Server
- configure the Thin Web Server with the setup program

## Prerequisites

A working knowledge of *Windows*<sup>®</sup> 2000 or *XP* is necessary to use this software. Use of a mouse is assumed and that you are right handed. If you are left handed see *personalizing Windows (switch mouse buttons)* in *Windows Help Index* and switch the left and right mouse buttons.

-  **Click** means to press and release the left mouse button once when the cursor is on the appropriate location on the screen.
-  **Double click** means to quickly press and release left mouse twice when the cursor is on the appropriate location on the screen.
-  **Right Click** means to press and release the right mouse once when the cursor is on the appropriate location on the screen.
-  **Enter** means to press the *Enter* key on the PC keyboard.


## Important information that you will need

To properly set up the software, you will need the nameplate data and other information from all your Automatic Transfer Switches (up to 64) including:

- ATS Name (your designation for the ATS)
- ATS Address  
(set in each Controller, Comm. Interface Module, or Acc. 72A)
- Voltage Rating, Ampere Rating, and number of Poles for each ATS
- Catalog No. and Serial No. of each ATS
- Type of ATS (ATS or ATS/BP [ATS with bypass-isolation switch])
- Power Manager Address (set in each Power Manager or Data Monitor)

## Manuals that you may need

|  |   |            |
|--|---|------------|
| <i>Catalog 214A700 &amp; 214A701</i>     | Data Monitor Operator's Manual                  | 381333-143 |
| <i>Catalog 5200 &amp; 5200T</i>          | Power Manager Operator's Manual                 | 381333-192 |
| <i>Catalog 5220 &amp; 5220T</i>          | Power Manager Xp Operator's Manual              | 381333-199 |
| <i>7000 Series</i>                       | ATS Group 5 Controller User's Guide             | 381333-126 |
| <i>Catalog 5110</i>                      | Serial Module Installation Manual               | 381333-240 |
| <i>Series 300</i>                        | ATS Communication Interface Module Instructions | 381339-189 |
| <i>ASCO 940, 962, 436, 434, 447, 448</i> | ATS Acc. 72A Instructions                       | 381339-172 |

**Tip**  Communication Address forms are included at the back to help you fill in needed information on your ATSS and Power Managers / Data Monitors.

**User's Guide** Refer to Power Monitoring & Control System *User's Guide 381333-276D* for version 5.

**Overview**

The ASCO 5500 Series Catalog A5510 *Thin Web Server* (TWS) provides real-time monitoring and control of ASCO Automatic Transfer Switches and engine-generator sets over the Internet or an intranet. The TWS also logs critical alarms and analog information.

The TWS can be used with ASCO 4000 & 7000 Series and Series 300 Automatic Transfer Switches that have Accessory 72A Communication Interface Modules.

**Specifications**

Power Requirements: 24 Vdc nominal (9-36 Vdc)  
35 Watts max.

Dimensions: 6" H, 10" W, 2" D  
(15.2 cm, 25.5 cm, 5 cm)

Weight: 3.5 lb. (1.6 kg)

Operating Temperature: 14 to 122° F (-10 to 50° C)  
at 5-85% relative humidity

Lights: power, IDE, & internal low battery alarm (RAM backup)

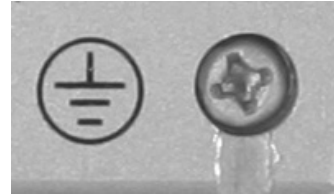
LAN Ports: two 10/100 base T RJ45

USB Ports: two USB 1.1

Serial Ports (DB-9): two RS-232 and  
two RS-232/422/485

**Ground Connection**

The TWS has a chassis ground point on the top left corner. Back out the screw and connect a braided lead as short as possible to earth ground.



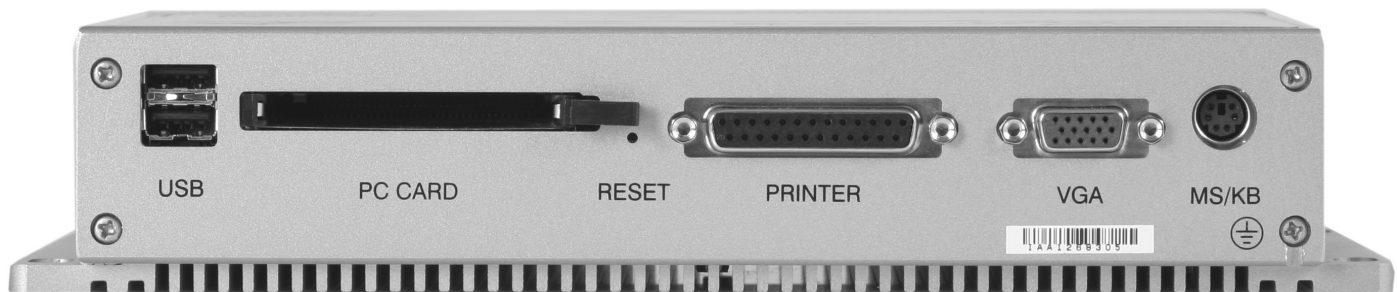
When the TWS is mounted on a door, a conductive strap must be used between the enclosure and the door. This connection provides proper grounding which does not rely upon the door hinges.

**Backup Battery - type BR2032**

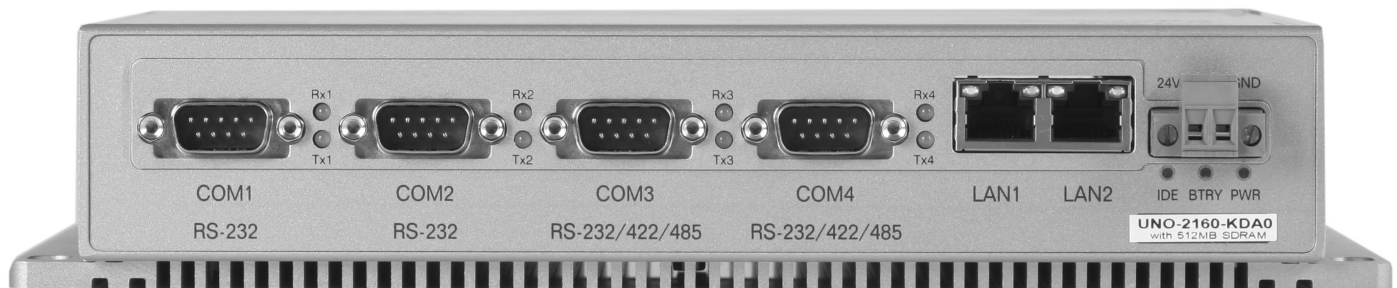
The SRAM memory is retained by an internal backup battery. If the battery light **BTRY** comes on, this battery must be replaced. The battery is located on the left side of the main circuit board. De-energize all power first. Then remove the bottom four screws and slide the the cover down and off. Use 3 V lithium type BR2032 only; do not substitute.



Low battery light



top view

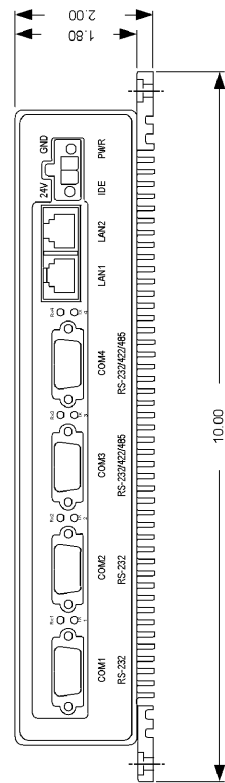
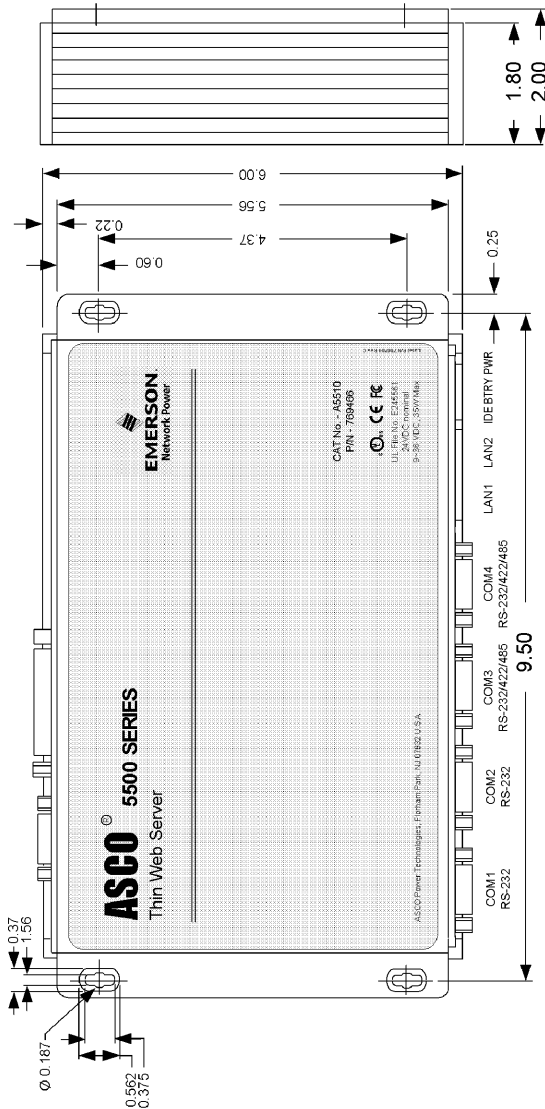
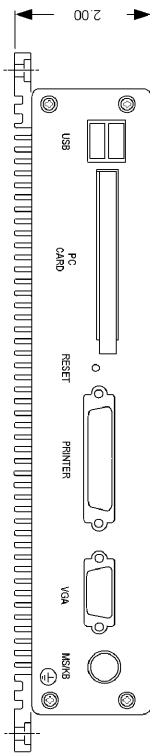


bottom view

**Mount the Thin Web Server**

Refer to the outline and mounting drawing 771812 and mount the Thin Web Server vertically to a flat surface in a clean and dry location. If it is mounted in an enclosure it must provide adequate ventilation for cooling.

Four 3/16" diameter mounting holes are provided in the back mounting plate. Securely mount the Thin Web Server as shown on the drawing.



- NOTES:**
1. For wiring information refer to 771811.
  2. Dimensions are in inches unless otherwise specified.

PROJECT NAME:

Thin Web Server  
Outline and Mounting



|                   |      |   |
|-------------------|------|---|
| DATE              | 2/05 | 766765-001  |
| BY                | SRC  | ASSEM. REF. NO.   |
| DRAWN BY          | SRC  | MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-1-003 FOR PLASTIC PARTS. SEE MP-1-065                 |
| CHECKED           | SRC  | PROPERTY OF ASCO POWER TECHNOLOGIES, L.P. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED |
| DRAFTING APPROVAL | SRC  |   |
| FINAL APPROVAL    | AS   |   |

|                            |         |        |       |        |
|----------------------------|---------|--------|-------|--------|
| A                          | 212465  | SRC    | JEH   | 3/07   |
| -                          | 203197  | SRC    | AS    | 2/05   |
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| CH                         | AV      | AA     | FS    | AR     |
| AG                         | AP      | AC     | AS    |        |
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| CHANGE LETTER              | ICON    | ICON   | SHEET | 1 of 1 |
|                            | A       | 212465 |       |        |

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Flomham Park, NJ 07932 USA

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## Connect the ATS Network

Refer to Interface Wiring Diagram 771811. Use only the recommended communication cable listed below to connect the ATS network to the Thin Web Server.

### Standard 80° C

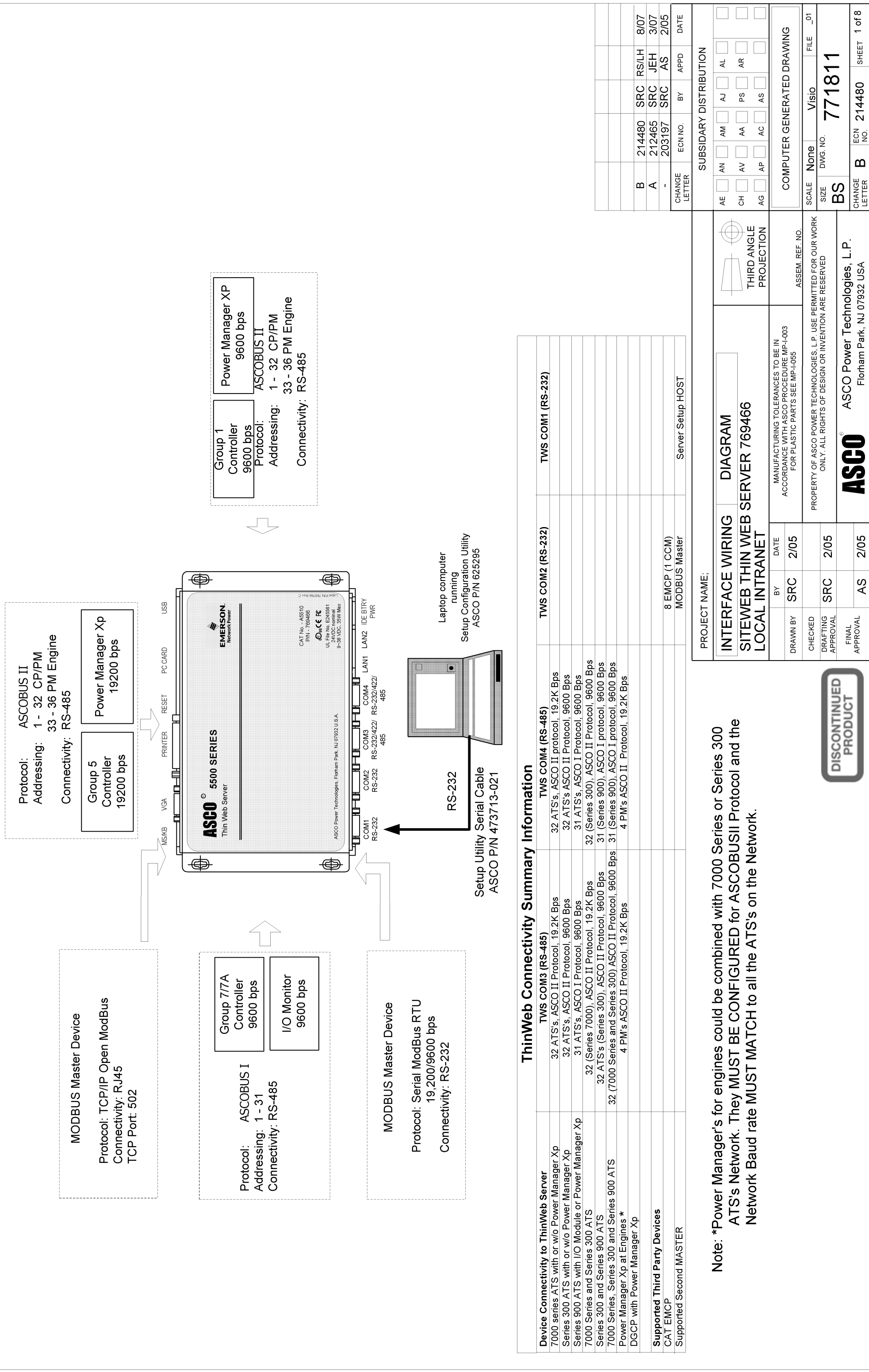
Belden 1419A, 9842, or 9829  
Alpha 6202C or 6222C

### Plenum Rated

Belden 89729 or 82729  
Alpha 58902

## Connect the Power

Refer to Interface Wiring Diagram 711811. Use a UL-Approved Class 2, 24 VDC nominal power supply (plug-in transformer 120 VAC to 24 VDC, 1 amp.; ASCO part no. 629458). Connect it to the Phoenix connector (bottom right).



**ThinWeb Connectivity Summary Information**

| Device Connectivity to ThinWeb Server              | TWS COM3 (RS-485)  | TWS COM4 (RS-485)                           | TWS COM2 (RS-232)                           | TWS COM1 (RS-232)                           |
|--|--|---|---|---|
| 7000 series ATS with or w/o Power Manager Xp       | 32 ATS's, ASCO II Protocol, 19.2K Bps                      | 32 ATS's, ASCO II Protocol, 19.2K Bps       | 32 ATS's, ASCO II Protocol, 19.2K Bps       | 32 ATS's, ASCO II Protocol, 19.2K Bps       |
| Series 300 ATS with or w/o Power Manager Xp        | 32 ATS's, ASCO II Protocol, 9600 Bps                       | 32 ATS's, ASCO II Protocol, 9600 Bps        | 32 ATS's, ASCO II Protocol, 9600 Bps        | 32 ATS's, ASCO II Protocol, 9600 Bps        |
| Series 900 ATS with I/O Module or Power Manager Xp | 31 ATS's, ASCO I Protocol, 9600 Bps                        | 31 ATS's, ASCO I Protocol, 9600 Bps         | 31 ATS's, ASCO I Protocol, 9600 Bps         | 31 ATS's, ASCO I Protocol, 9600 Bps         |
| 7000 Series and Series 300 ATS                     | 32 (Series 7000), ASCO II Protocol, 19.2K Bps              | 32 (Series 300), ASCO II Protocol, 9600 Bps | 32 (Series 300), ASCO II Protocol, 9600 Bps | 32 (Series 300), ASCO II Protocol, 9600 Bps |
| Series 300 and Series 900 ATS                      | 32 ATS's (Series 300), ASCO II Protocol, 9600 Bps          | 31 (Series 900), ASCO I Protocol, 9600 Bps  | 31 (Series 900), ASCO I Protocol, 9600 Bps  | 31 (Series 900), ASCO I Protocol, 9600 Bps  |
| 7000 Series, Series 300 and Series 900 ATS         | 32 (7000 Series and Series 300) ASCO II Protocol, 9600 Bps | 4 PM's ASCO II Protocol, 19.2K Bps          | 4 PM's ASCO II Protocol, 19.2K Bps          | 4 PM's ASCO II Protocol, 19.2K Bps          |
| Power Manager Xp at Engines *                      |  |   |   |   |
| DGCP with Power Manager Xp                         |  |   |   |   |
| <b>Supported Third Party Devices</b>               |  |   |   |   |
| CAT EMCP   |  |   | 8 EMCP (1 CCM)                              |   |
| Supported Second MASTER                            |  |   | MODBUS Master                               | Server Setup HOST                           |

**Note:** \*Power Manager's for engines could be combined with 7000 Series or Series 300 ATS's Network. They **MUST BE CONFIGURED** for ASCOBUSII Protocol and the Network Baud rate **MUST MATCH** to all the ATS's on the Network.

PROJECT NAME: **INTERFACE WIRING DIAGRAM**

**SITWEB THIN WEB SERVER 769466**

**LOCAL INTRANET**

THIRD ANGLE PROJECTION

ASSEMBLY REF. NO.

MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-I-003 FOR PLASTIC PARTS SEE MP-I-055

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Florham Park, NJ 07932 USA

BY: SRC DATE: 2/05

CHECKED: SRC DATE: 2/05

DRAFTING APPROVAL: SRC DATE: 2/05

FINAL APPROVAL: AS DATE: 2/05

SCALE: None VISIO FILE: \_01

SIZE: DWG. NO. **771811**

CHANGE LETTER: **BS** ECN NO. 214480 SHEET 1 of 8

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SUBSIDIARY DISTRIBUTION

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CH  AV  AA  PS  AR

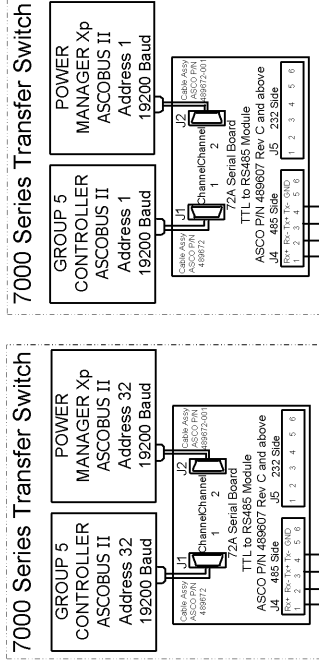
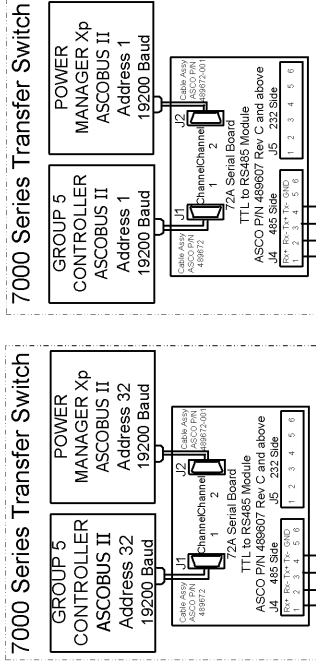
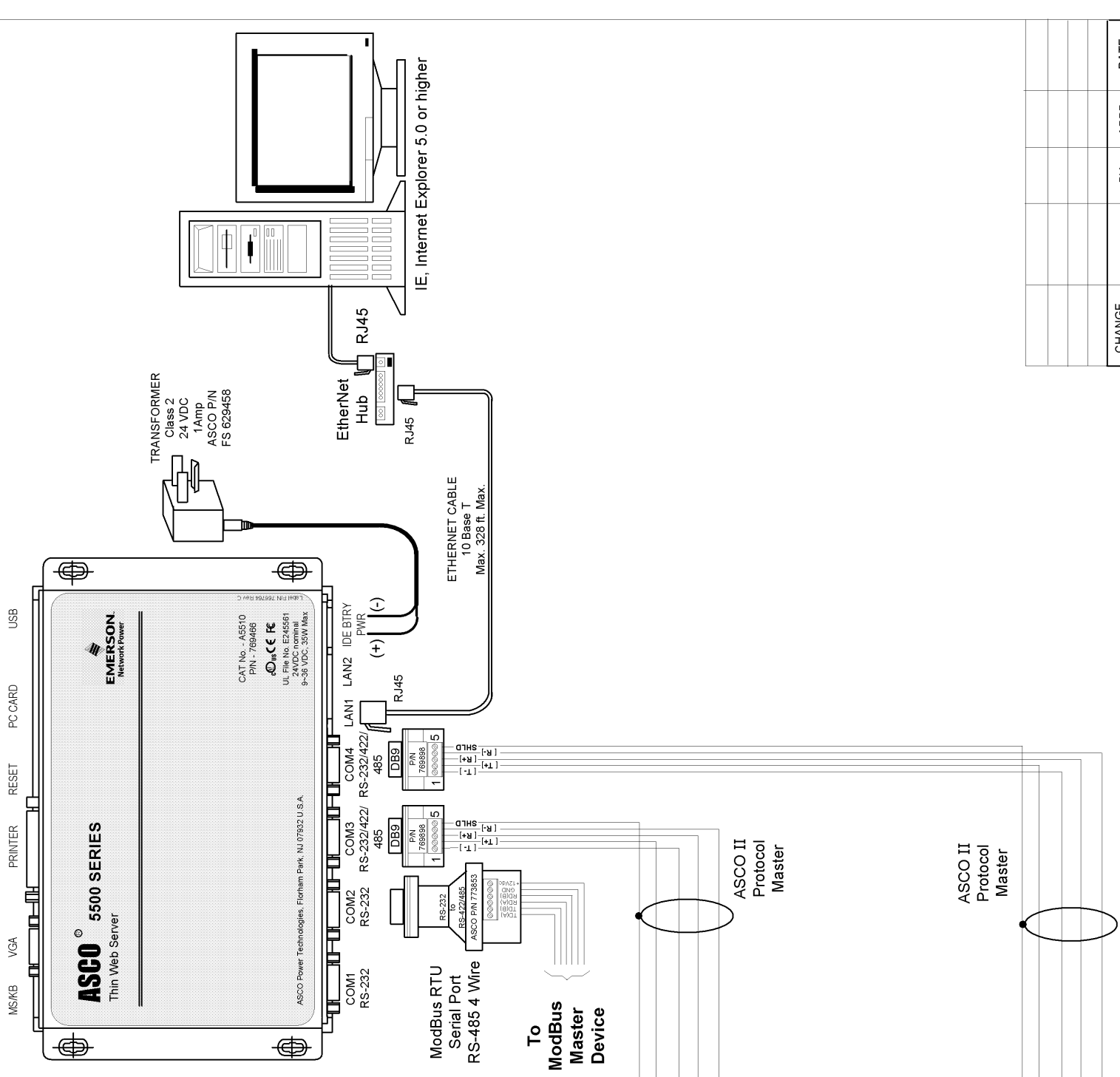
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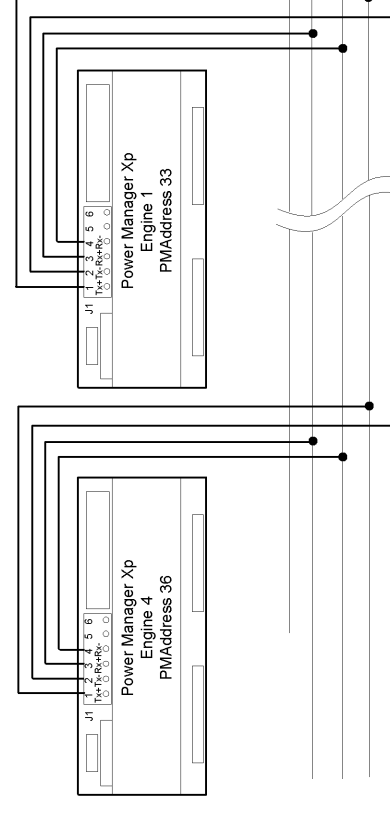


| Ethernet Communication Cable |              |                        |                              |                        |
|------------------------------|--------------|------------------------|------------------------------|------------------------|
| Type                         | Know as      | Max. Length of Segment | Cable Type                   | Connectors             |
| 10 Base I                    | Twisted Pair | 328ft. (100 meters)    | UTP CAT.3.                   | 4, 5 RJ-45             |
| 10 Base 2                    | ThinNet      | 606ft. (185 meters)    | RG-58/U                      | BNC                    |
| 10 Base 5                    | ThickNet     | 1640ft. (500 meters)   | RG 8/11                      | N-Type                 |
|                              |              |                        |                              |                        |
|                              |              |                        | Cable Impedance/Terminations | Belden P/N (reference) |
|                              |              |                        | 50 Ohms                      | 7882A                  |
|                              |              |                        | 50 Ohms                      | 9907                   |
|                              |              |                        |                              | 9880                   |

Typical wiring  
for ASCO P/N  
769898



Field Wiring See Table 1 RS485 4 wire 4000 ft. Max.



Field Wiring See Table 1 RS485 4 wire 4000 ft. Max.

| TABLE 1                        |  |
|--------------------------------|--|
| Acceptable Communication Cable |  |
| Standard 80°C                  |  |
| Belden 9842                    |  |
| Belden 9829                    |  |
| Alpha 6202C                    |  |
| Alpha 6222C                    |  |
| <u>Plenum Rated</u>            |  |
| Belden 89729                   |  |
| Belden 82729                   |  |
| Alpha 58902                    |  |

**DISCONTINUED  
PRODUCT**

- Note:
1. Controllers and Power Managers **MUST BE CONFIGURED FOR THE SAME BAUD RATE AND PROTOCOL ON EACH LAN.**

| PROJECT NAME:   |  |
|---|--|
| <b>INTERFACE WIRING</b>                                 | <b>DIAGRAM</b>   |
| <b>SITWEB THIN WEB SERVER LOCAL INTRANET</b>            |  |
| <b>7000 Series ATS with or without Power Manager Xp</b> |  |
| BY  | DATE   |
| SRC   | 2/05   |
| CHECKED   |  |
| DRAFTING APPROVAL                                       |  |
| FINAL APPROVAL  |  |
| AS  | 2/05   |
|   | ASSEM. REF. NO.  |
|   | MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-I-003 FOR PLASTIC PARTS SEE MP-I-055 |

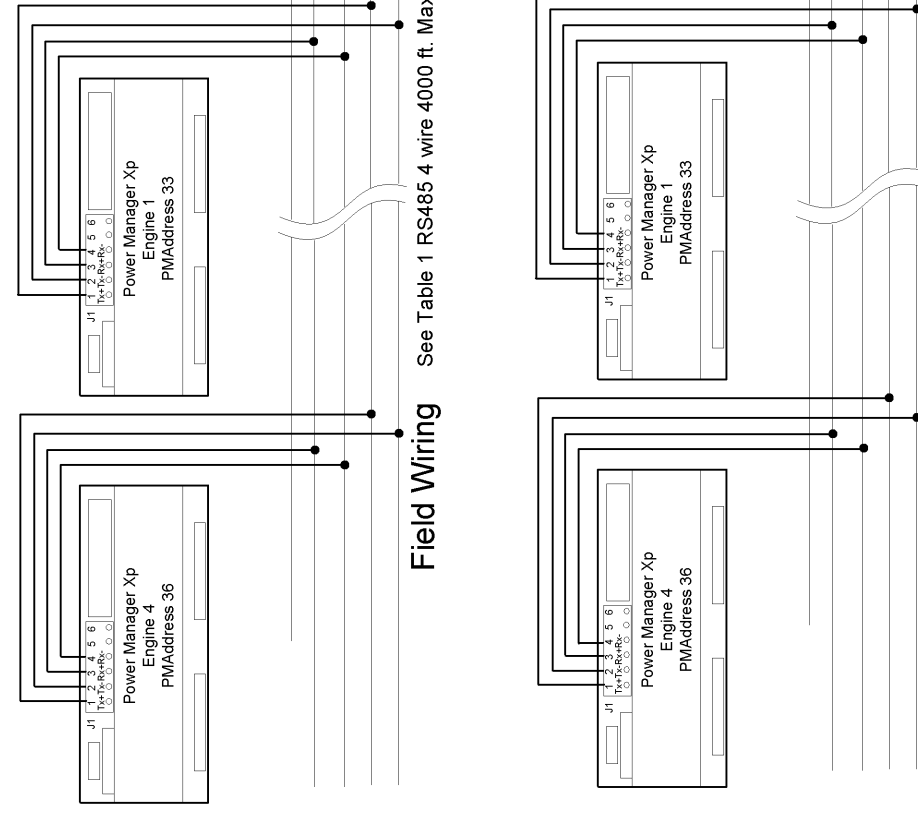
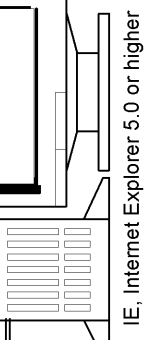
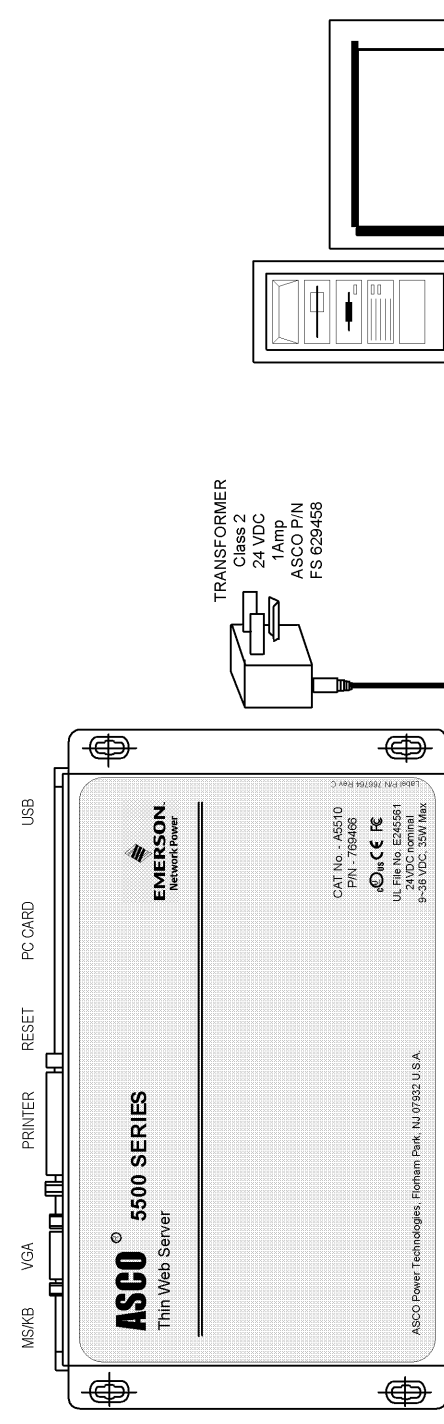
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| <input type="checkbox"/> CH | <input type="checkbox"/> AV | <input type="checkbox"/> AA | <input type="checkbox"/> PS | <input type="checkbox"/> AR | <input type="checkbox"/> |
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| FILE _01                    |                             |                             |                             |                             |                          |
| CHANGE LETTER               | ECN NO.                     | BY                          | APPD                        | DATE                        |                          |
| <b>B</b>                    | <b>214480</b>               |                             |                             |                             |                          |

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Florham Park, NJ 07932 USA

CHANGE LETTER **B** ECN NO. **214480** SHEET 2 of 8

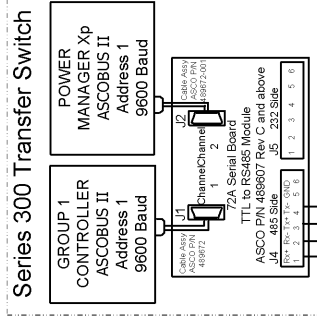
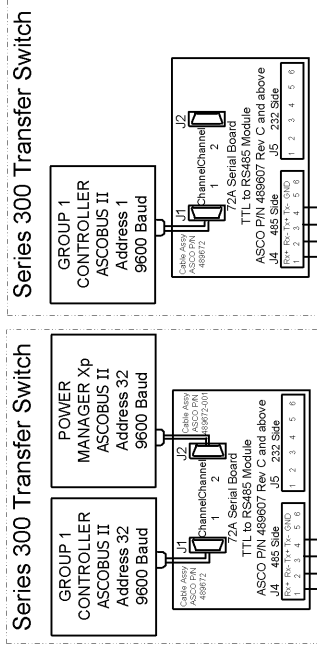
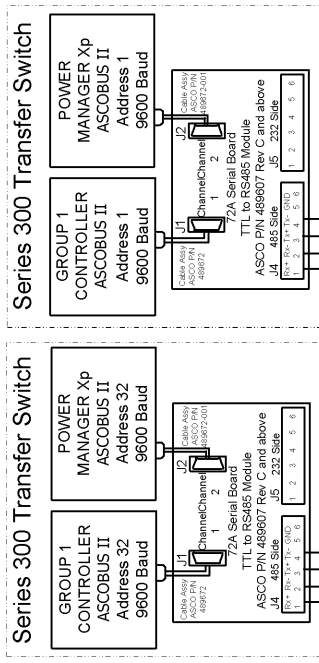
| Ethernet Communication Cable |              |                        |                           |
|------------------------------|--------------|------------------------|---------------------------|
| Type                         | Know as      | Max. Length of Segment | Max. Stations per Segment |
| 10 Base T                    | Twisted Pair | 328ft. (100 meters)    | 1024                      |
| 10 Base 2                    | ThinNet      | 606ft. (185 meters)    | 30                        |
| 10 Base 5                    | ThickNet     | 1640ft. (500 meters)   | 1024                      |
|                              |              |                        |                           |
|                              |              |                        |                           |
|                              |              |                        |                           |
|                              |              |                        |                           |
|                              |              |                        |                           |
|                              |              |                        |                           |
|                              |              |                        |                           |

Typical wiring for ASCO P/N 769898



Field Wiring See Table 1 RS485 4 wire 4000 ft. Max.

Field Wiring See Table 1 RS485 4 wire 4000 ft. Max.



**DISCONTINUED PRODUCT**

| TABLE 1                        |                     |
|--------------------------------|---------------------|
| Acceptable Communication Cable | Standard 80°C       |
|                                | Belden 9842         |
|                                | Belden 9829         |
|                                | Alpha 6202C         |
|                                | Alpha 6222C         |
|                                | <u>Plenum Rated</u> |
|                                | Belden 89729        |
|                                | Alpha 58902         |

| PROJECT NAME:    |         |  |      |
|------------------|---------|--|------|
| INTERFACE WIRING | DIAGRAM | SITEWEB THIN WEB SERVER LOCAL INTRANET Series 300 ATS with or without Power Manager Xp |      |
| DRAWN BY         | DATE    | BY   | DATE |
| SRC              | 2/05    | SRC  | 2/05 |
| CHECKED          |         | DRAFTING APPROVAL  |      |
|                  |         | FINAL APPROVAL   |      |
| AS               | 2/05    | AS   | 2/05 |

| SUBSIDIARY DISTRIBUTION |    |    |    |
|-------------------------|----|----|----|
| AE                      | AN | AM | AJ |
| CH                      | AV | AA | PS |
| AG                      | AP | AC | AS |

| CHANGE LETTER | ECN NO. | BY | APPD | DATE |
|---------------|---------|----|------|------|
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|               |         |    |      |      |
|               |         |    |      |      |

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| <b>B</b>                   | <b>214480</b> | <b>214480</b> | <b>3 of 8</b> |

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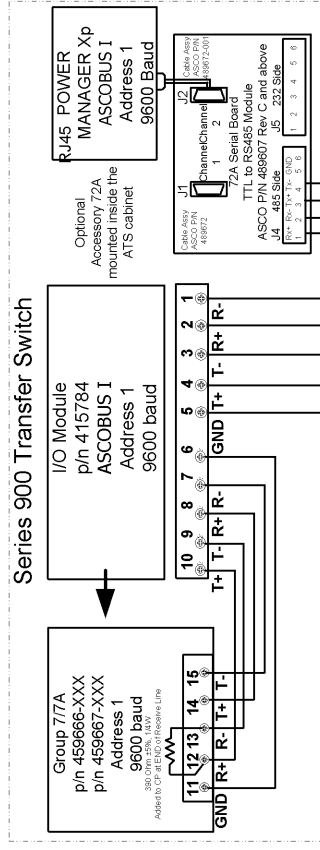
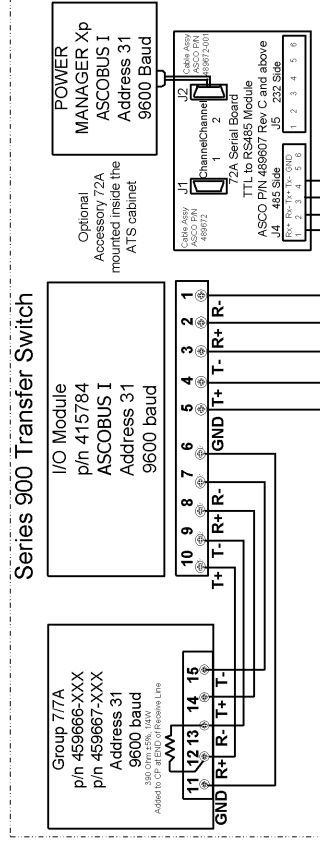
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MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-I-003 FOR PLASTIC PARTS SEE MP-I-055

THIRD ANGLE PROJECTION

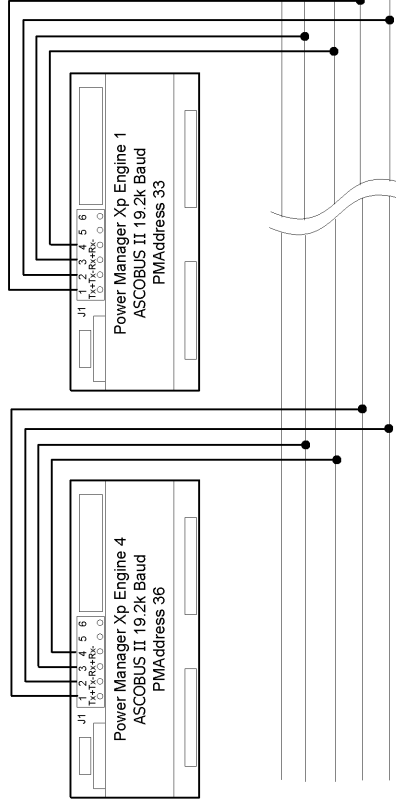
| Ethernet Communication Cable |              |                        |                           |
|------------------------------|--------------|------------------------|---------------------------|
| Type                         | Know as      | Max. Length of Segment | Max. Stations per Segment |
| 10 BaseT                     | Twisted Pair | 328ft. (100 meters)    | 1024                      |
| 10 Base2                     | ThinNet      | 606ft. (185 meters)    | 30                        |
| 10 Base5                     | ThickNet     | 1640ft. (500 meters)   | 1024                      |

Typical wiring for ASCO P/N 769898



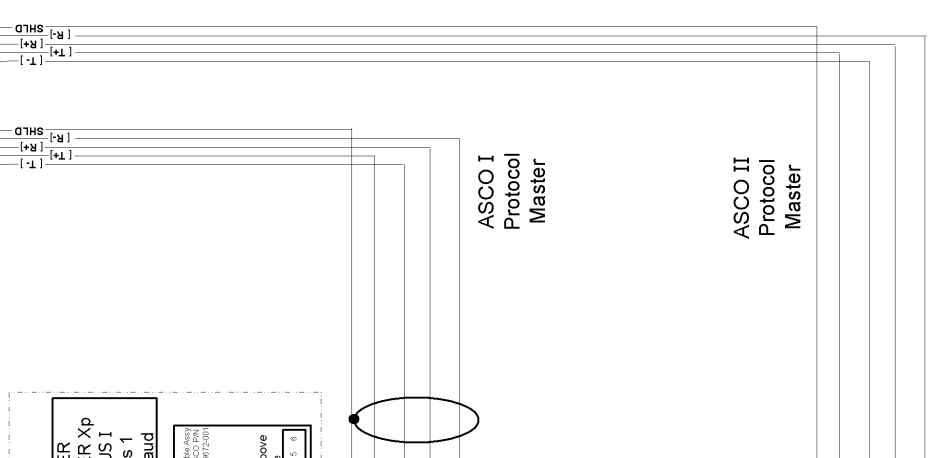
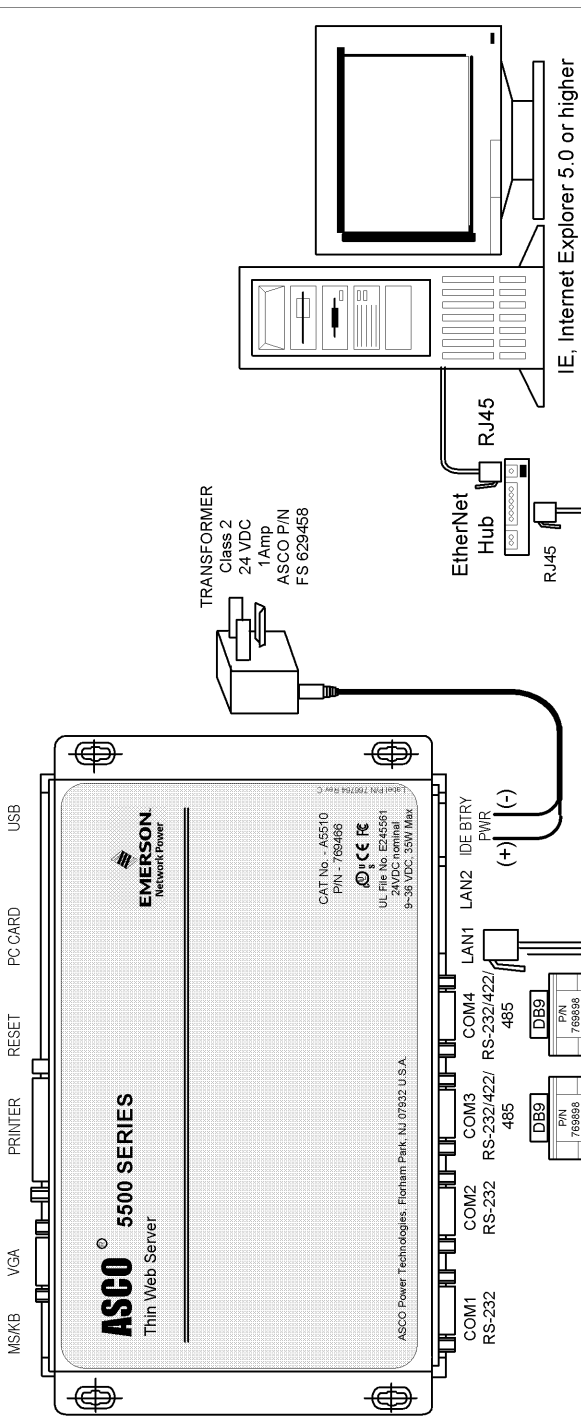
Field Wiring See Table 1 RS485 4 wire 4000 ft. Max.

Field Wiring See Table 1 RS485 4 wire 4000 ft. Max.



Field Wiring

See Table 1 RS485 4 wire 4000 ft. Max.



DISCONTINUED PRODUCT

TABLE 1  
Acceptable Communication Cable

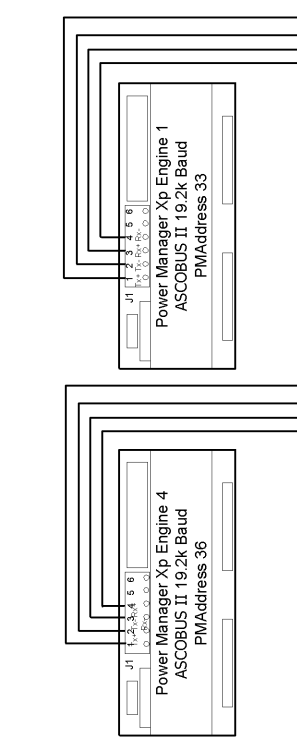
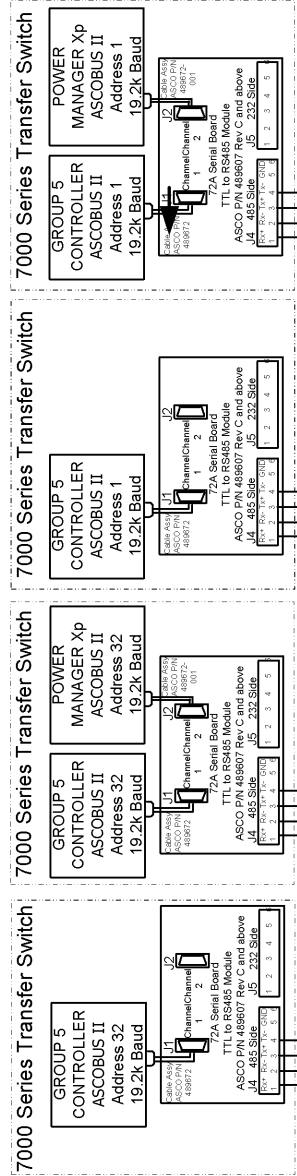
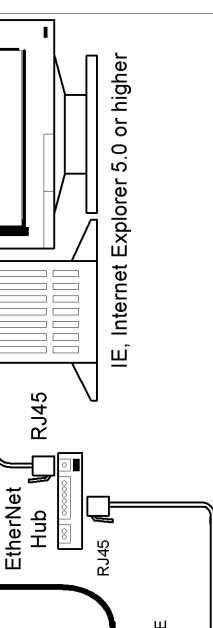
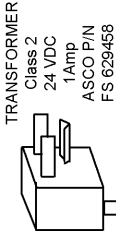
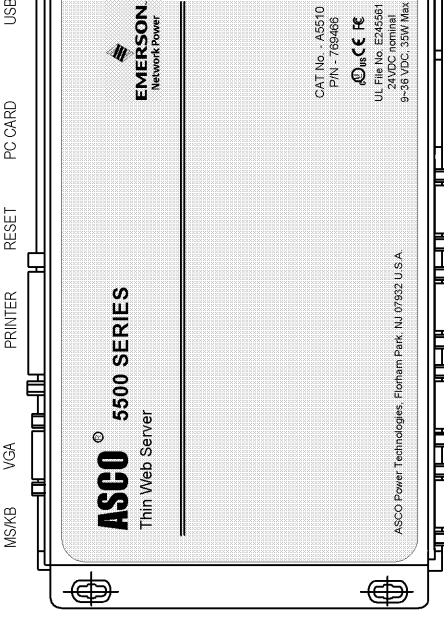
|                     |
|---------------------|
| Standard 80°C       |
| Belden 9842         |
| Belden 9829         |
| Alpha 6202C         |
| Alpha 6222C         |
| <u>Plenum Rated</u> |
| Belden 89729        |
| Alpha 58902         |

| PROJECT NAME:   |      | INTERFACE WIRING DIAGRAM  |  | SUBSIDIARY DISTRIBUTION   |        |
|---|------|---|--|---|--------|
| SITEWEB THIN WEB SERVER LOCAL INTRANET<br>Series 900 ATS with or without Power Manager Xp |      | THIRD ANGLE PROJECTION  |  | AE <input type="checkbox"/> AN <input type="checkbox"/> AM <input type="checkbox"/> AJ <input type="checkbox"/> AL <input type="checkbox"/><br>CH <input type="checkbox"/> AV <input type="checkbox"/> AA <input type="checkbox"/> PS <input type="checkbox"/> AR <input type="checkbox"/><br>AG <input type="checkbox"/> AP <input type="checkbox"/> AC <input type="checkbox"/> AS <input type="checkbox"/> |        |
| BY  | DATE | MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-I-003 FOR PLASTIC PARTS SEE MP-I-055                  |  | COMPUTER GENERATED DRAWING  |        |
| SRC   | 2/05 | ASSEMBLY REF. NO.   |  | SCALE   | None   |
| CHECKED   |      | PROPERTY OF ASCO POWER TECHNOLOGIES, L.P. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED |  | SIZE  | Visio  |
| DRAFTING APPROVAL   |      |   |  | CHANGE LETTER   | BS     |
| FINAL APPROVAL  |      |   |  | DWG. NO.  | 771811 |
| AS  | 2/05 | ASCO Power Technologies, L.P.<br>Florham Park, NJ 07932 USA   |  | ECN NO.   | 214480 |
|   |      |   |  | SHEET   | 4 of 8 |

Note:  
1. Controllers and I/O Monitors MUST BE CONFIGURED FOR THE SAME BAUD RATE AND PROTOCOL ONEACH LAN.

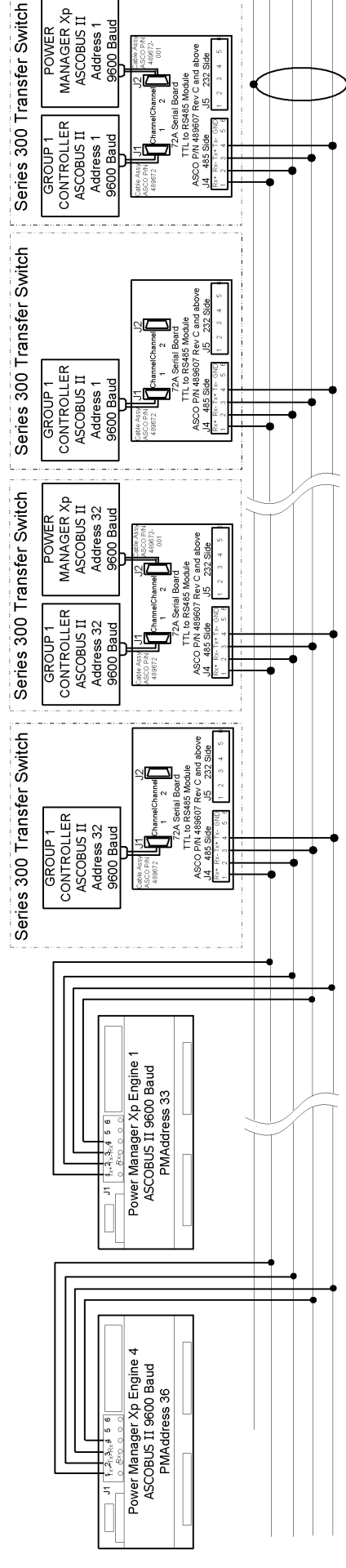
| Ethernet Communication Cable |                      |                        |                           |
|------------------------------|----------------------|------------------------|---------------------------|
| Type                         | Know as              | Max. Length of Segment | Max. Stations per Segment |
| 10 BaseT Twisted Pair        | 328ft. (100 meters)  | 1024                   |                           |
| 10 Base2 ThinNet             | 606ft. (185 meters)  | 30                     |                           |
| 10 Base5 ThickNet            | 1640ft. (500 meters) | 1024                   |                           |
|                              |                      | UTP CAT3, 4, 5         | RJ-45                     |
|                              |                      | RG 58/U                | BNC                       |
|                              |                      | RG 8/11                | N-Type                    |
|                              |                      |                        | 50 Ohms                   |
|                              |                      |                        | 50 Ohms                   |
|                              |                      |                        | Belden P/N (reference)    |
|                              |                      |                        | 7882A                     |
|                              |                      |                        | 9907                      |
|                              |                      |                        | 9880                      |

Typical wiring for ASCO P/N 769898



Field Wiring See Table 1 RS485 4 wire 4000 ft. Max.

ASCO II Protocol Master



Field Wiring See Table 1 RS485 4 wire 4000 ft. Max.



TABLE 1  
Acceptable Communication Cable Standard 80°C

|              |
|--------------|
| Belden 9842  |
| Belden 9829  |
| Alpha 6202C  |
| Plenum Rated |
| Belden 89729 |
| Belden 82729 |
| Alpha 58902  |

Note:  
1. Controllers and Power Managers MUST BE CONFIGURED FOR THE SAME BAUD RATE AND PROTOCOL ON EACH LAN.

PROJECT NAME: INTERFACE WIRING DIAGRAM  
SITEWEB THIN WEB SERVER LOCAL INTRANET  
7000 Series and 300 Series ATS with/without Power Manager Xp

| MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-I-003 FOR PLASTIC PARTS SEE MP-I-055 |       |
|--|-------|
| BY   | DATE  |
| SRC  | 11/00 |
| CHECKED  |       |
| DRAFTING APPROVAL  |       |
| SRC  | 11/00 |
| FINAL APPROVAL   |       |
| AS   | 11/00 |

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ASSEMBLY REF. NO. ASSEMBLY REF. NO.



CHANGE LETTER

| ECN NO. | BY | APPD | DATE |
|---------|----|------|------|
|         |    |      |      |
|         |    |      |      |
|         |    |      |      |

SUBSIDIARY DISTRIBUTION

|    |    |    |    |    |  |  |  |  |  |  |  |
|----|----|----|----|----|--|--|--|--|--|--|--|
| AE | AN | AM | AJ | AL |  |  |  |  |  |  |  |
| CH | AV | AA | PS | AR |  |  |  |  |  |  |  |
| AG | AP | AC | AS |    |  |  |  |  |  |  |  |

COMPUTER GENERATED DRAWING

SCALE None VISIO FILE \_01

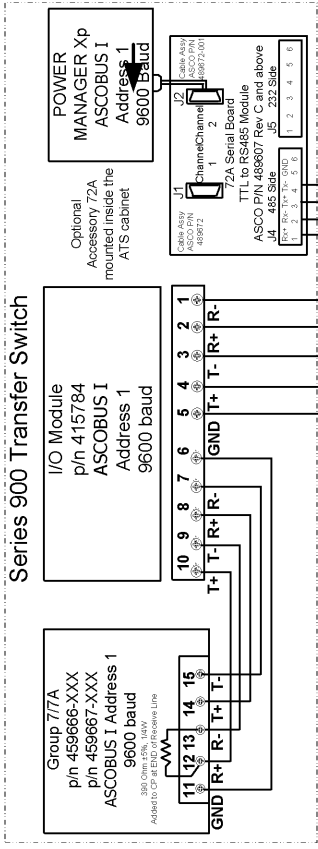
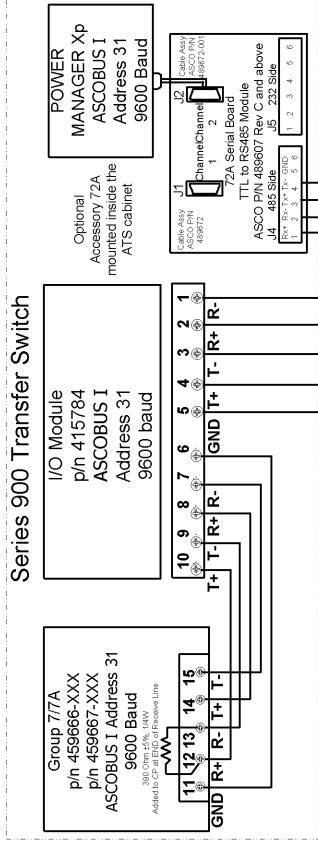
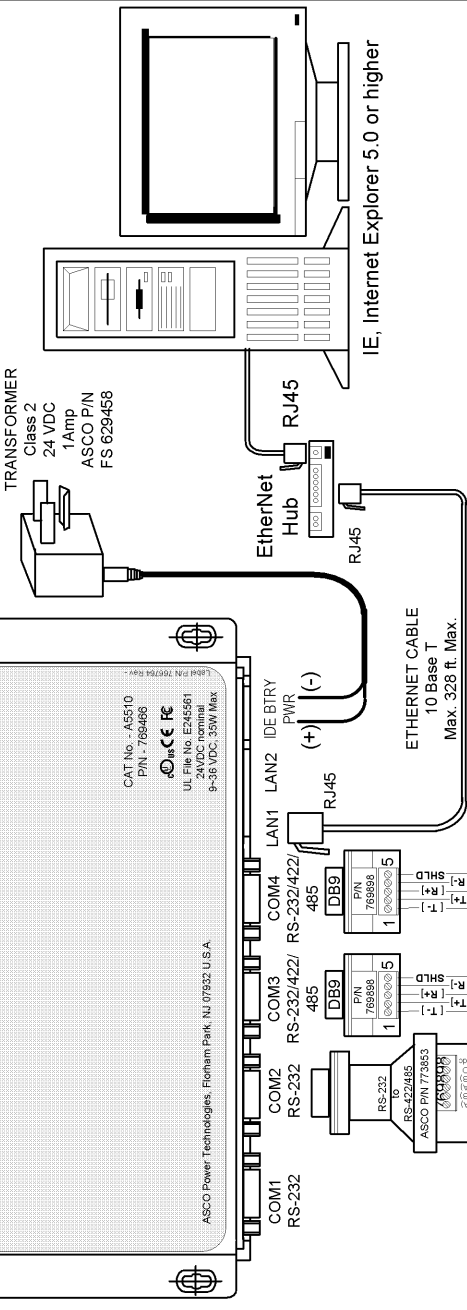
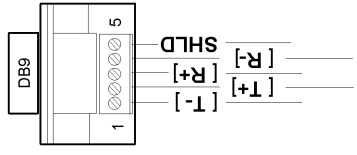
SIZE DWG. NO. 771811

CHANGE LETTER B ECN NO. 214480 SHEET 5 of 8

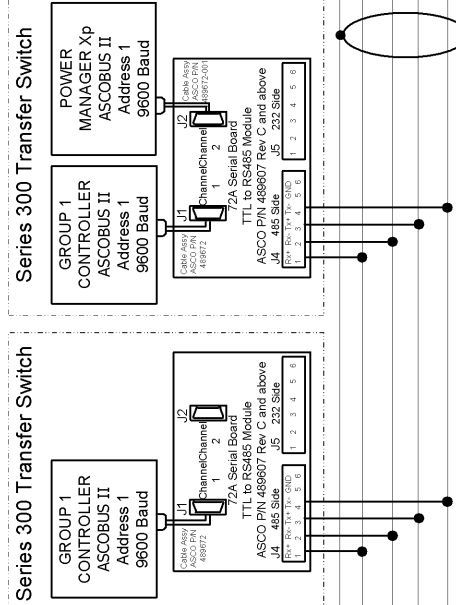
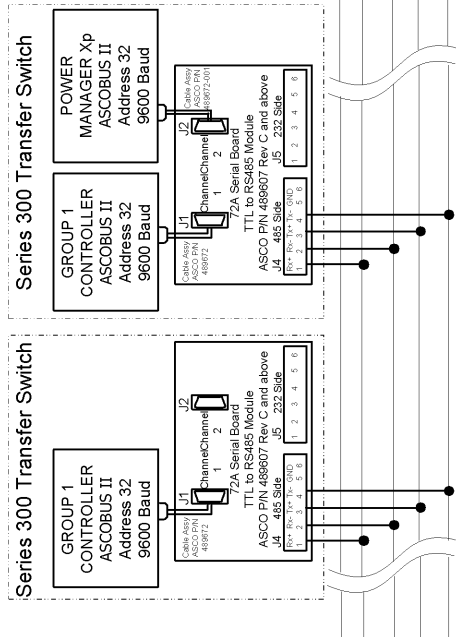
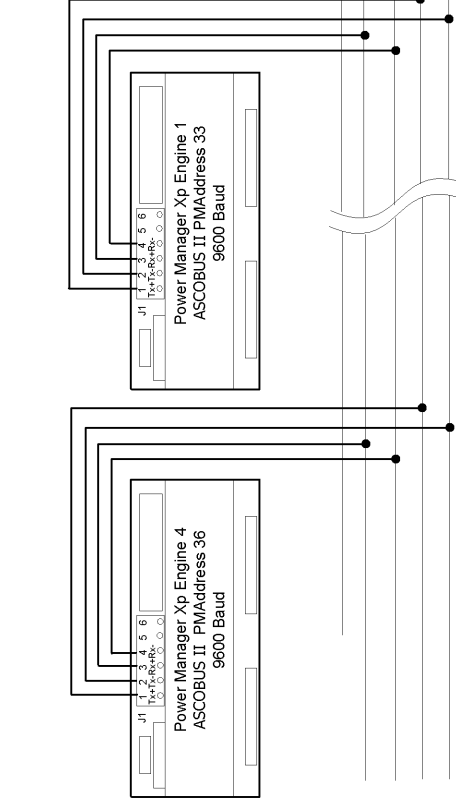
ASCO Power Technologies, L.P.  
Florham Park, NJ 07932 USA

| Ethernet Communication Cable |              |                        |                           |                      |
|------------------------------|--------------|------------------------|---------------------------|----------------------|
| Type                         | Know as      | Max. Length of Segment | Max. Stations per Segment | Connectors           |
| 10 Base T                    | Twisted Pair | 328ft. (100 meters)    | 1024                      | UTP CAT3, 4, 5 RJ-45 |
| 10 Base 2                    | ThinNet      | 606ft. (185 meters)    | 30                        | RG 58/U BNC          |
| 10 Base 5                    | ThickNet     | 1640ft. (500 meters)   | 1024                      | RG 8/U N-Type        |

Typical wiring for ASCO P/N 769898



Field Wiring See Table 1 RS485 4 wire 4000 ft. Max.



Field Wiring See Table 1 RS485 4 wire 4000 ft. Max.

**DISCONTINUED PRODUCT**

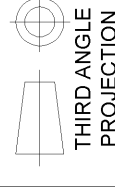
| TABLE 1                        |  |
|--------------------------------|--|
| Acceptable Communication Cable |  |
| Standard 80°C                  |  |
| Beiden 984Z                    |  |
| Beiden 9829                    |  |
| Alpha 6202C                    |  |
| Alpha 6222C                    |  |
| Plenum Rated                   |  |
| Beiden 89729                   |  |
| Beiden 82729                   |  |
| Alpha 58902                    |  |

**Note:**

- 1. Controllers and I/O Monitors MUST BE CONFIGURED FOR THE SAME BAUD RATE AND PROTOCOL ON EACH LAN.

PROJECT NAME:

**INTERFACE WIRING DIAGRAM**  
**SITEWEB THIN WEB SERVER LOCAL INTRANET**  
 Series 900 and Series 300 ATS's with or without Power Manager Xp

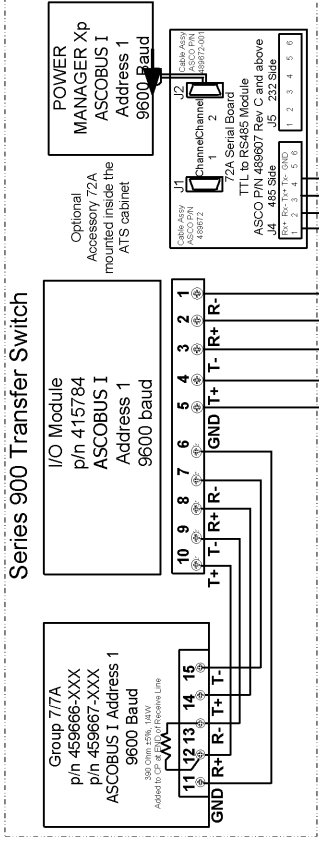
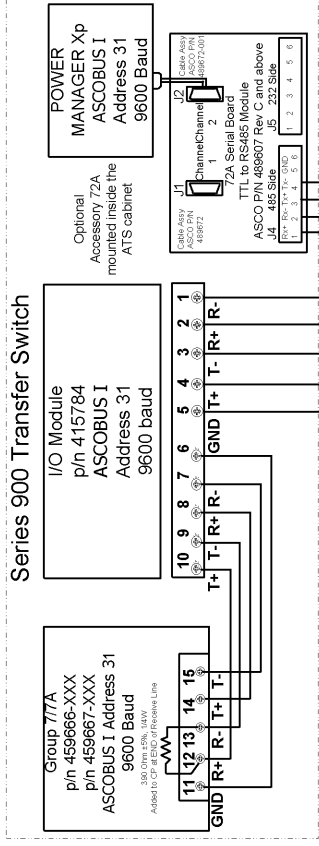
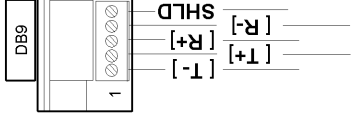


SUBSIDIARY DISTRIBUTION

| DRAWN BY  |               | DATE                       | MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-I-003 FOR PLASTIC PARTS SEE MP-I-055 |              |
|---|---------------|----------------------------|--|--------------|
| SRC   |               | 2/05                       |  |              |
| CHECKED   |               | 2/05                       |  |              |
| DRAFTING APPROVAL   |               |                            |  |              |
| FINAL APPROVAL  | AS            | 2/05                       |  |              |
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|   |               | COMPUTER GENERATED DRAWING |  |              |
| BY  | CHANGE LETTER | SCALE                      | None   | FILE         |
|   | B             | SIZE                       | DWG. NO.   | 771811       |
|   |               | ECN NO.                    | 214480   | SHEET 6 of 8 |

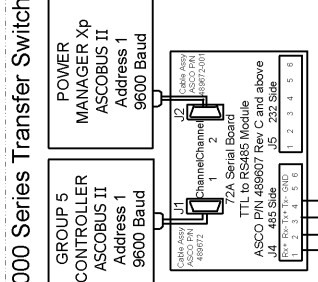
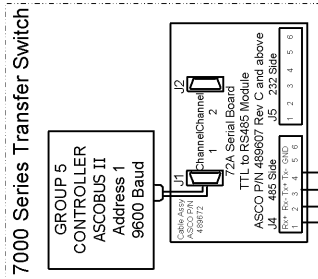
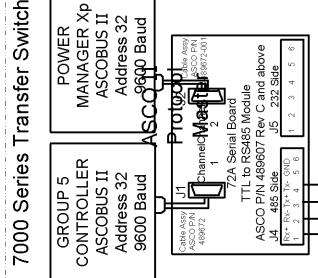
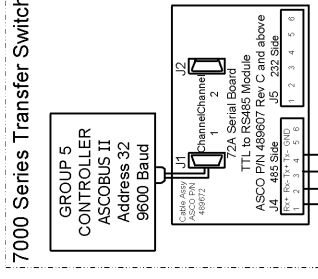
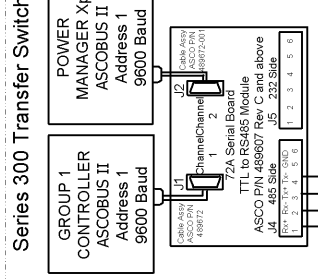
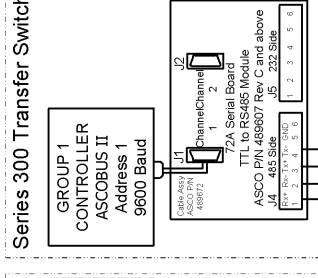
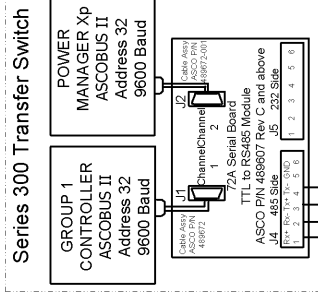
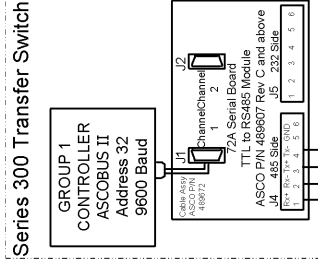
| Ethernet Communication Cable |                      |                        |                           |
|------------------------------|----------------------|------------------------|---------------------------|
| Type                         | Know as              | Max. Length of Segment | Max. Stations per Segment |
| 10 Base I Twisted Pair       | 328ft. (100 meters)  | 1024                   | UTP CAT3, 4, 5            |
| 10 Base 2 ThinNet            | 606ft. (185 meters)  | 30                     | RG-58/U                   |
| 10 Base 5 ThickNet           | 1640ft. (500 meters) | 1024                   | RG 8/11                   |
|                              |                      |                        | N-Type                    |
|                              |                      |                        | 50 Ohms                   |
|                              |                      |                        | 50 Ohms                   |
|                              |                      |                        | 7882A                     |
|                              |                      |                        | 9907                      |
|                              |                      |                        | 9880                      |

Typical wiring for ASCO P/N 769898



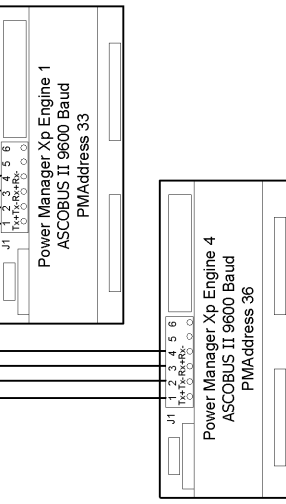
See Table 1 RS485 4 wire 4000 ft. Max.

Field Wiring



Field Wiring

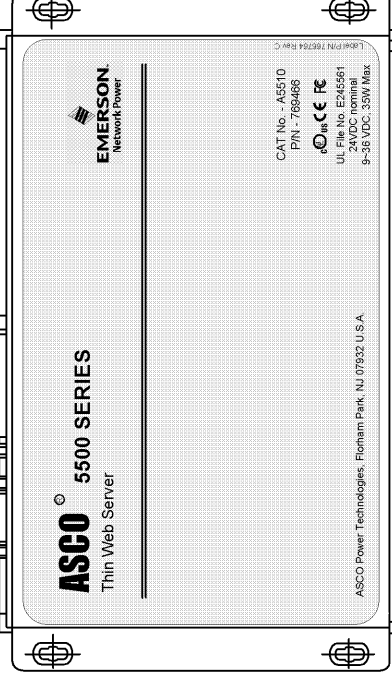
See Table 1 RS485 4 wire 4000 ft. Max.



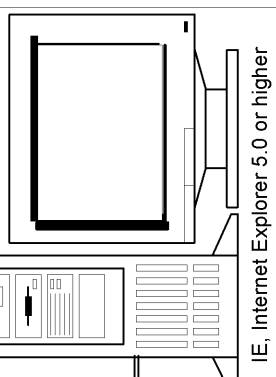
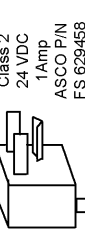
| TABLE 1                        |               |
|--------------------------------|---------------|
| Acceptable Communication Cable | Standard 80°C |
|                                | Belden 9842   |
|                                | Belden 9829   |
|                                | Alpha 6202C   |
|                                | Alpha 6222C   |
| Plenum Rated                   | Belden 89729  |
|                                | Belden 82729  |
|                                | Alpha 58902   |

Note:  
1. Controllers, Power Managers and I/O Modules MUST BE CONFIGURED FOR THE SAME BAUD RATE AND PROTOCOL ON EACH LAN.

MS/KB VGA PRINTER RESET PC CARD USB



TRANSFORMER

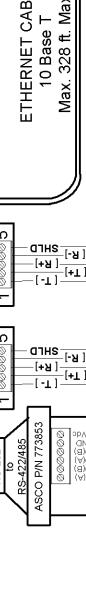


EtherNet Hub

RJ45

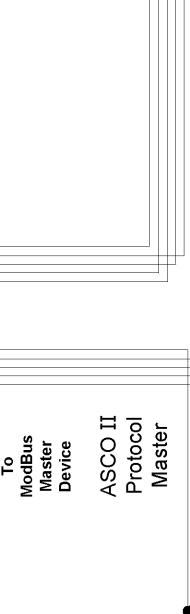
RJ45

IE, Internet Explorer 5.0 or higher



To ModBus Master Device

ASCO II Protocol Master



PROJECT NAME:

INTERFACE WIRING DIAGRAM  
SITEWEB THIN WEB SERVER LOCAL INTRANET  
7000 Series, Series 300 and Series 900 ATS's

THIRD ANGLE PROJECTION

SUBSIDIARY DISTRIBUTION

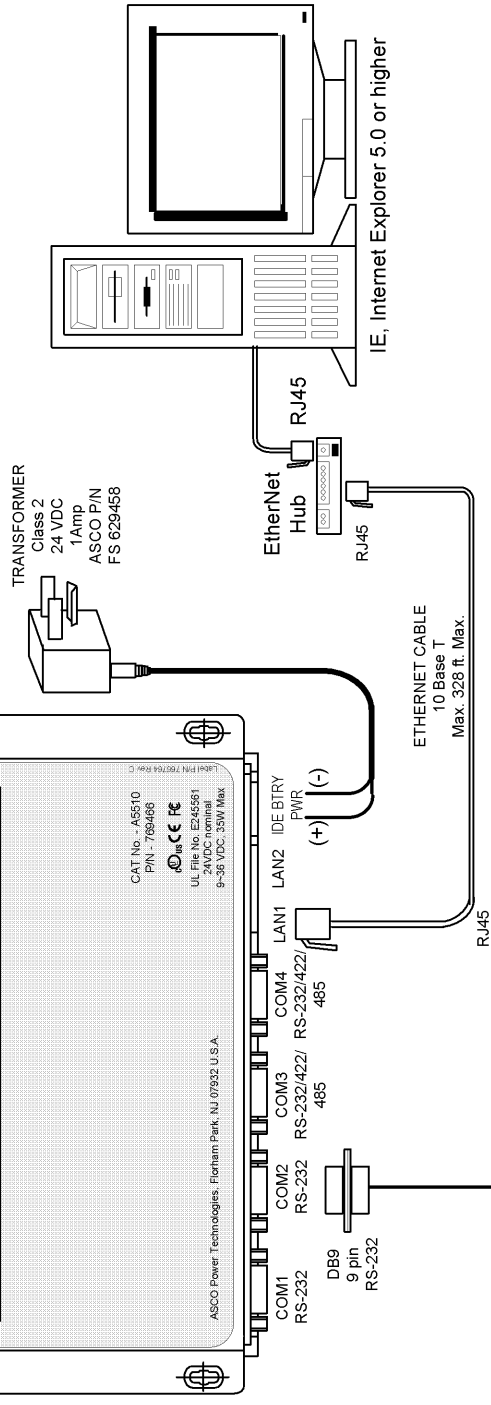
|   |      |  |                   |                            |      |         |        |              |
|---|------|--|-------------------|----------------------------|------|---------|--------|--------------|
| BY  | DATE | MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-I-003 FOR PLASTIC PARTS SEE MP-I-005 | ASSEMBLY REF. NO. | SCALE                      | None | Visible | FILE   | _01          |
| DRAWN BY  | SRC  | 2/05   |                   |                            |      |         | BS     | 771811       |
| CHECKED   | SRC  | 2/05   |                   |                            |      |         |        |              |
| DRAFTING APPROVAL   | SRC  | 2/05   |                   |                            |      |         |        |              |
| FINAL APPROVAL  | AS   | 2/05   |                   |                            |      |         |        |              |
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| ASCO Power Technologies, L.P.<br>Florham Park, NJ 07932 USA   |      |  |                   | CHANGE LETTER              | B    | ECN NO. | 214480 | SHEET 7 of 8 |

DISCONTINUED PRODUCT

| Ethernet Communication Cable |             |                        |                           |
|------------------------------|-------------|------------------------|---------------------------|
| Type                         | Know as     | Max. Length of Segment | Max. Stations per Segment |
| 10 BaseT                     | wisted Pair | 328ft. (100 meters)    | 1024                      |
| 10 Base2                     | ThinNet     | 606ft. (185 meters)    | 30                        |
| 10 Base5                     | ThickNet    | 1640ft. (500 meters)   | 1024                      |

| Connectors | Cable Type     | Cable Impedance/ Terminations | Belden P/N (reference) |
|------------|----------------|-------------------------------|------------------------|
| RJ-45      | UTP CAT3. 4. 5 | 7882A                         | 7882A                  |
| BNC        | RG 58/U        | 50 Ohms                       | 9907                   |
| N-Type     | RG 8/11        | 50 Ohms                       | 9880                   |

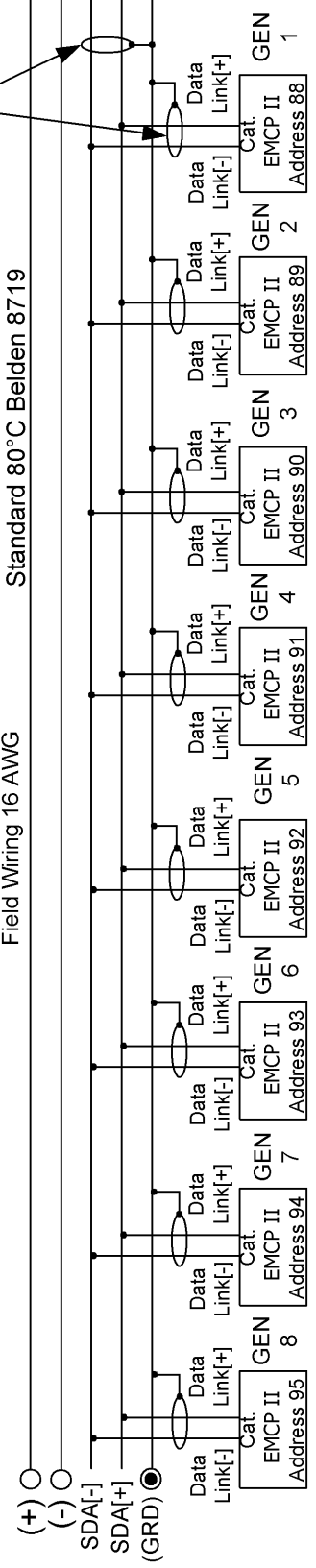


24VDC Best Battery circuit from Switchgear MASTER section

Acceptable Communication Cable Standard 80°C Belden 8719

Battery Circuit Field Wiring 16 AWG

Interface Cable ASCO P/N 473713-022



**DISCONTINUED PRODUCT**

| TABLE 1                                      |  |
|--|--|
| Acceptable Communication Cable Standard 80°C |  |
| Belden 9842                                  |  |
| Belden 9829                                  |  |
| Alpha 6202C                                  |  |
| Alpha 6222C                                  |  |
| Plenum Rated                                 |  |
| Belden 89729                                 |  |
| Belden 82729                                 |  |
| Alpha 58902                                  |  |

PROJECT NAME:

**INTERFACE WIRING DIAGRAM**  
**SITEWEB THIN WEB SERVER LOCAL INTRANET**

| BY  | DATE | ASSEM. REF. NO.   |
|-----|------|---|
| SRC | 2/05 | MANUFACTURING TOLERANCES TO BE IN ACCORDANCE WITH ASCO PROCEDURE MP-I-003 FOR PLASTIC PARTS SEE MP-I-055                  |
| SRC | 2/05 | PROPERTY OF ASCO POWER TECHNOLOGIES, L.P. USE PERMITTED FOR OUR WORK ONLY. ALL RIGHTS OF DESIGN OR INVENTION ARE RESERVED |
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 Florham Park, NJ 07932 USA

| CHANGE LETTER | ECN NO. | BY | APPD | DATE |
|---------------|---------|----|------|------|
|               |         |    |      |      |

| SUBSIDIARY DISTRIBUTION     |                             |                             |                             |                             |
|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| <input type="checkbox"/> AE | <input type="checkbox"/> AN | <input type="checkbox"/> AM | <input type="checkbox"/> AJ | <input type="checkbox"/> AL |
| <input type="checkbox"/> CH | <input type="checkbox"/> AV | <input type="checkbox"/> AA | <input type="checkbox"/> PS | <input type="checkbox"/> AR |
| <input type="checkbox"/> AG | <input type="checkbox"/> AP | <input type="checkbox"/> AC | <input type="checkbox"/> AS | <input type="checkbox"/>    |

| SCALE | None | Visible | FILE |
|-------|------|---------|------|
| SIZE  |      |         | _01  |

| CHANGE LETTER | ECN NO. | ECN NO. | SHEET  |
|---------------|---------|---------|--------|
| BS            | 214480  | 214480  | 8 of 8 |

COMPUTER GENERATED DRAWING

771811



## Minimum PC Requirements for Setup and Browser Programs



The **Thin Web Server** requires the following minimum system configuration for the setup and browser program for serial connection:

- Microsoft® Windows® 2000 or XP operating system
- Personal computer with *Pentium*™ 4 2 GHz or higher processor
- CD-ROM drive
- Serial Port (RS-232), Ethernet Port (RJ-45)

## How to Install the Setup Program for Serial Connection

The **Thin Web Server Setup** program on the CD-ROM must be installed on the PC or notebook PC that is temporarily connected to the **Thin Web Server**. The **setup.exe** program takes you through the installation with on-screen instructions.

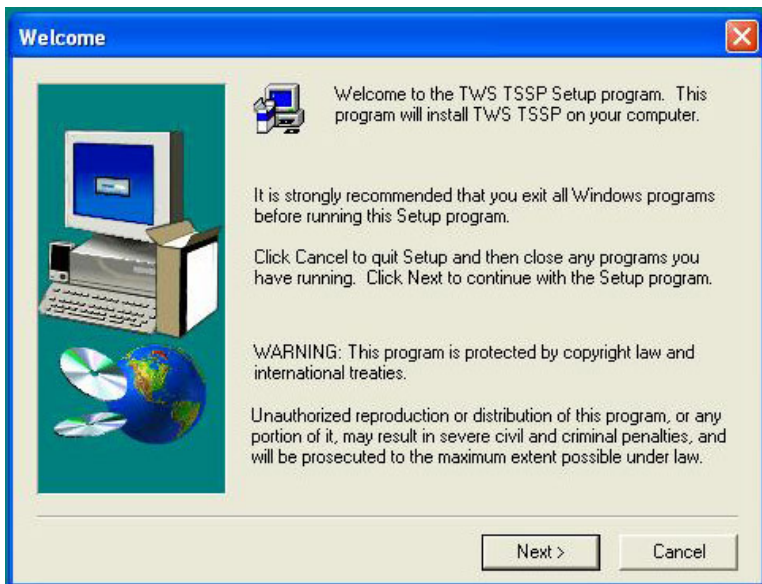
**Note:** *Windows*® may require *Administration rights* to install this software.

1. Load the CD into the PC's CD-ROM drive.



The PC should automatically launch the **setup.exe** file (if the PC is set-up for *autorun*). If the installation does not start automatically, click **Start** on the taskbar, then choose **Run** from the **Start** menu.

In the dialog box type the filename **setup.exe**. Use (your CD drive letter):\setup.exe (*e:\setup.exe* for example). Click **OK**.



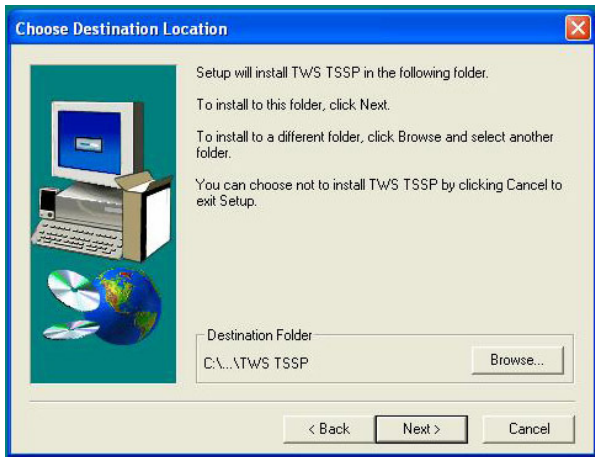
The Thinweb Server Setup Program logo displays during installation process.

2. The **Welcome** screen displays after the CD is read.

To proceed click **Next** to continue or click **Cancel** to quit.

Continued on next page →.





3. The **Choose Destination Location** screen displays.

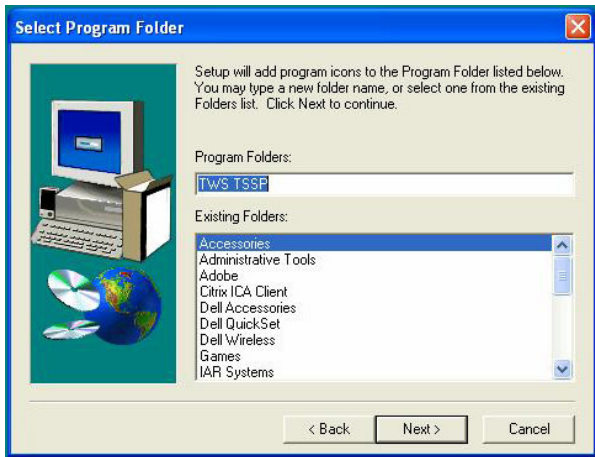
Use the default destination directory.

Click **Next**.

4. The **Select Program Folders** screen displays.

Use the default directory in the Program Folder.

Click **Next**.



5. The **Copying Windows Systems files ...** dialog box displays.

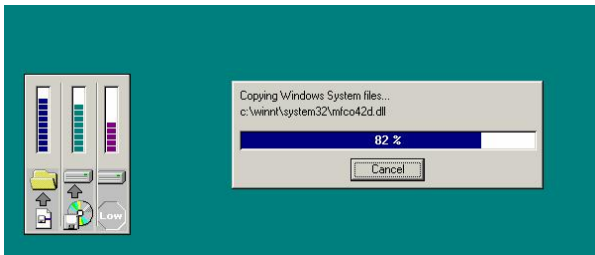
These screens show you the actual installation status

6. The **Setup Complete** screen displays.

Click **Finish**. Remove the CD-ROM and return it to its case. Keep it in a safe place along with the Serial number

You might consider restarting *Windows* to initialize the system before running the software.

Notice that after start-up of *Windows*<sup>TM</sup> the icon is on the desktop which you can double click to launch the **ThinWeb Server** setup program. (proceed to next page)



## How to start and setup the *Thin Web Server* software

After installing the *Thin Web Setup Program* start the *Thin Web Server* software and set it up.



The screenshot shows the 'Port Config' tab of the ThinWeb Server Setup program. It features two main sections: 'Network Setting' and 'SMTP Setting'. The 'Network Setting' section includes input fields for IP Address, Subnet Mask, and Default Gateway, all set to 000.000.000.000. The 'SMTP Setting' section includes an 'Outgoing Mail Server' field (000.000.000.000), a checkbox for 'Authentication Enabled' (unchecked), and fields for 'Username' and 'Password'. A note at the bottom states: 'Note: Here is where you will setup the server either for internet or intranet access. Make sure to review the settings before rebooting the server. If you have configured an outgoing mail server for alarm notification, make sure not to forget to fill-up an originating email address found at the Company Info section and at least one receiving email address found at the Alarms section.' The status bar at the bottom shows 'Port status: Sending Receiving' and 'Server Disconnected'.

1. Double click the icon on the *Windows* desktop.
2. The **Port Config** tab displays first. Work with your network administrator to set up the server either for an internet or an intranet application. Enter the *Ethernet* TCP/IP information and outgoing mail server (SMTP). If email authentication must be enabled (ask your administrator), click *Authentication Enabled* and fill in the *Username* and *Password*.
3. Click the **Security** tab. By default the server is set as an HTTP & HTTPS server. A default certificate name & key name is shown. Use this default and click Next. If not, make sure the files are installed in the server using the Server File Management Utility available in the program.
4. Click the **User Access Configuration** lower tab. Enter up to 5 *Users* (include yourself), their *Passwords*, and their *Levels*. (you are level 3). The Access Levels are:
  - 1 is monitor only (data page viewing only)
  - 2 is monitor and control (can transfer ATS loads)
  - 3 is administrator (assigns users and able to change TWS configuration settings)



### CAUTION

Be sure that the *Users* to whom you give control access (levels 2 or 3) are knowledgeable enough to have control of load transfer and of the generator(s).

5. Click the **Alarms** tab. Click the **ATS Setting** lower tab. Select the ATS status events that you want reported by clicking the boxes next to the items under *ATS Alarm Selection* (shown below).

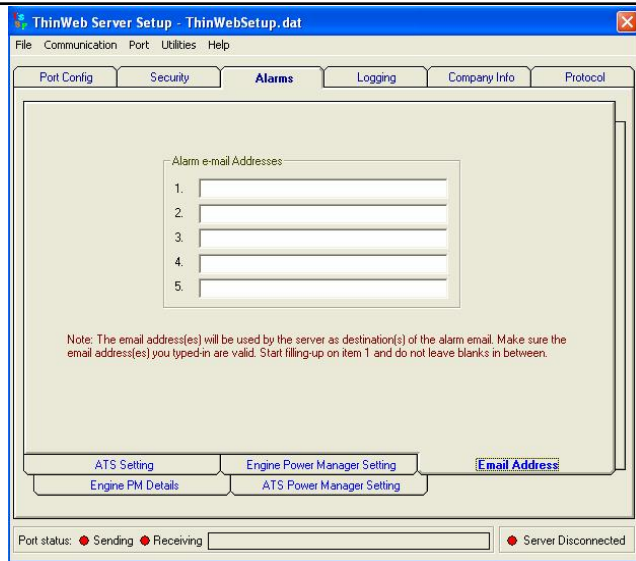
*continued on the next page* →

The screenshot shows the 'Security' tab of the ThinWeb Server Setup program. It features a checkbox for 'Enable Secure Socket Layer Communication Channel' (checked). Below it is the 'SSL Security Files' section with input fields for 'Certificate Name' (ascocert.pem), 'Key Name' (ascok ey.pem), and 'Authentication Process' (dh1024.pem). A note states: 'Note: By default, the system will both act as an HTTP & an HTTPS servers using the certificate, key and authentication process files shown above. It is from here where you can specify what files the server will use for SSL. The description specified in each textbox must match the actual name and extension of the file. These files must be installed in the server using the Server File Management Utility available in this program.' At the bottom, there are buttons for 'User Access Configuration' and 'Communication Channel'. The status bar at the bottom shows 'Port status: Sending Receiving' and 'Server Disconnected'.

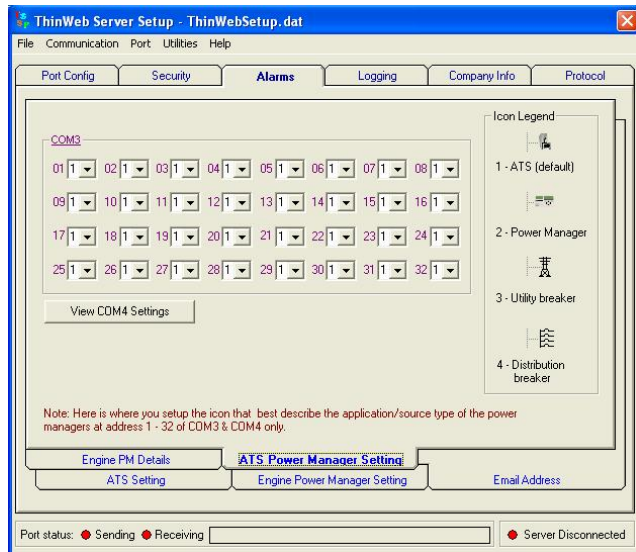
The screenshot shows the 'User List' section within the 'Security' tab. It contains a table with columns for 'Name', 'Password', and 'Level'. The table lists five users: User 1, User 2, User 3 (asco, fpri), User 4, and User 5 (admin, admin). A note below the table states: 'Note: Here is where you can assign users who can access the server over the internet/intranet. It is advised to completely fill-up the user names and passwords. The legend below defines the type of access you can assign to a user.' Below the note is a 'Level Legend': 1 - Monitoring Access Only, 2 - Monitoring & Control Access, 3 - Administrative Access. At the bottom, there are buttons for 'User Access Configuration' and 'Communication Channel'. The status bar at the bottom shows 'Port status: Sending Receiving' and 'Server Disconnected'.

The screenshot shows the 'Alarms' tab of the ThinWeb Server Setup program. It features the 'ATS Alarm Selection' section with a list of checkboxes: 'ATS Connected To Normal', 'ATS Connected To Emergency', 'ATS Normal Source Available', 'ATS Emergency Source Available', and 'ATS Engine Start Signal'. A note states: 'Note: The following transfer switch status can be included in alarm monitoring. All of these status points will be applied to all switches found at COM3, COM4 & Network 1. Click on the check box adjacent to the status point you want to include in alarm monitoring. Only checked status points will be included in the monitoring process.' At the bottom, there are buttons for 'ATS Setting', 'Engine Power Manager Setting', 'Engine PM Details', 'ATS Power Manager Setting', and 'Email Address'. The status bar at the bottom shows 'Port status: Sending Receiving' and 'Server Disconnected'.

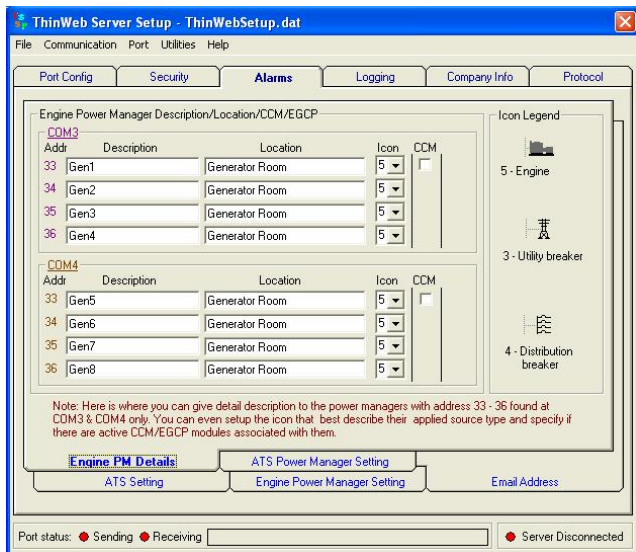
**DISCONTINUED  
PRODUCT**



Alarms - Email Address



Alarms - ATS Power Manager Setting



Alarms - Engine PM Details

6. Click the **Email Address** lower tab. Then enter the e-mail addresses (up to 5) of the persons whom you want notified of the selected alarms. Double check each e-mail address displayed in the five text boxes to verify that it has been typed correctly.

Note: Make sure outgoing mailserver is configured properly and working. This functionality can be tested with third party e-mail testing programs.

7. Click the **ATS Power Manager Setting** lower tab. The *Network 1* Power Managers (addresses) are displayed first. For each Power Manager (PM) address click the drop-down arrow and select the appropriate icon number associated with the PM. If a Power Manager:

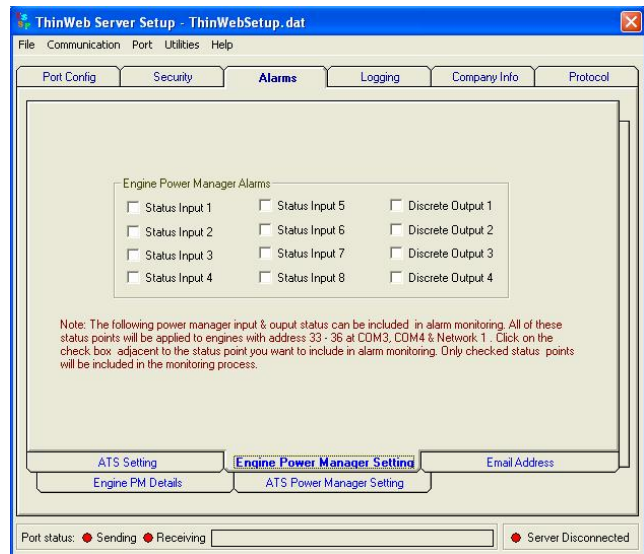
- is with an ATS, select icon **1**.
- is with a circuit breaker, select icon **3** or **4**.
- is not associated with an ATS or a CB, select icon **2**.

Then click *View Network 2 Settings* and select icons for those PMs.

8. Click the **Engine PM Details** lower tab. Network 1 & 2 Engine Power Manager (addresses 33-36) are displayed. Enter a *Description* and *Location* for each PM. Then select the appropriate icon associated with each PM. Select if device is associated with CCM, EGCP, or both.

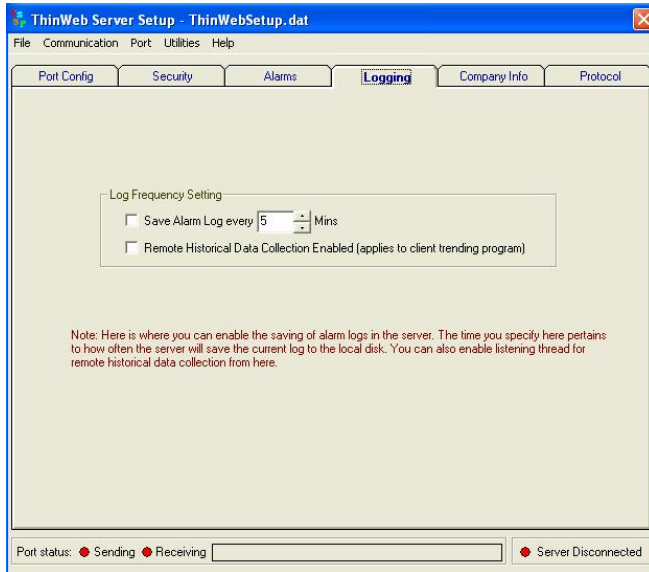
9. Click the **Engine Power Manager Setting** lower tab. Select the check boxes *Status Inputs* and/or *Discrete Outputs* that you want included in alarms monitoring.

*continued on the next page* ➡



Alarms - Engine Power Manager Setting

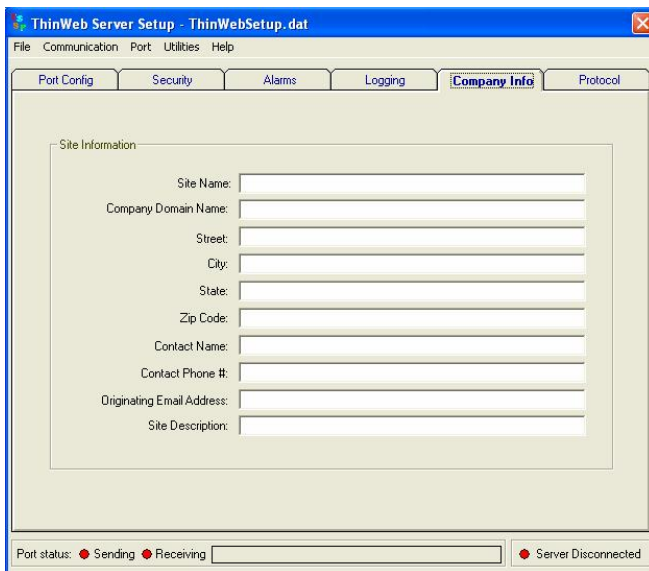




10. Click the **Logging** tab. You can enable or disable historical data logging & alarm logging and change their default update interval.

- Historical data logging enabled or disabled flag  
Historical data logging update interval (15 to 30 minutes)  
Default frequency is 30 minutes
- Alarm logging enabled or disabled flag  
Alarms logging update interval (5 -20 seconds)  
Default frequency is 5 seconds

11. Click the **Company Info** tab. Fill in the site information. This information will be displayed at the Thin Web Server home page.

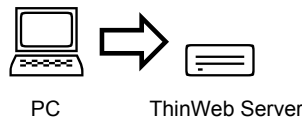
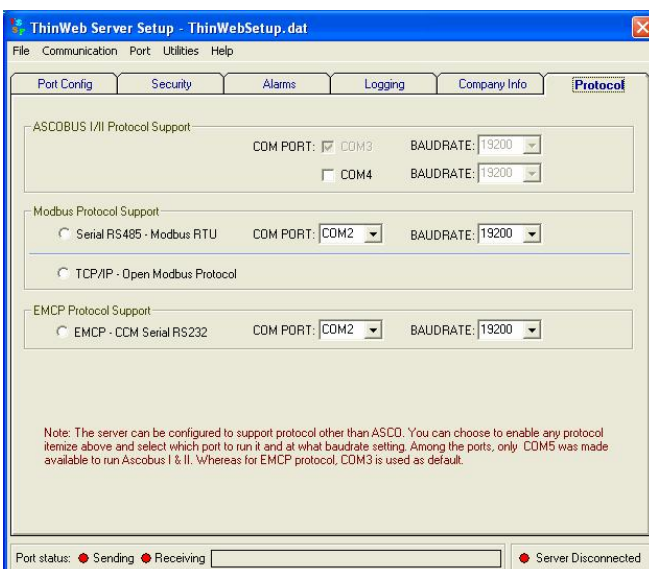


Site Name  
Company Domain Name  
Street  
City  
State  
Zip Code  
Contact Name  
Contact Phone #  
Email Address  
Site Description

12. Click the **Protocol** tab.  
Click the protocol that you want to use for third party device interface. Then select the com port and baud rate to match with the Master device.

13. On the **File** menu click **Save** to retain all your settings.

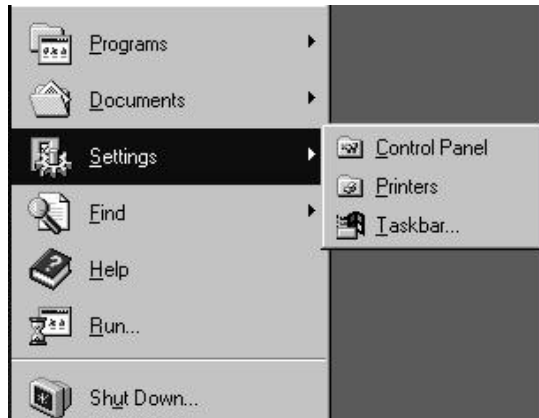
14. On the **Communication** menu click **Upload To Server** to transfer your settings to the *ThinWeb Server*.



- Be sure that the *ThinWeb Server* is properly connected to all devices and that it is powered up.
- Be sure that the *ThinWeb Server* COM1 is connected to the COM port of the PC running the setup program. A special serial cable is provided.
- If a *Timed Out* error message is displayed, the upload to the server did not occur. Recheck the COM port connections of the PC and the *ThinWeb Server*.
- Print config. file or copy it onto a diskette for safekeeping

15. Now check **System Configuration** as described in the User's Guide (correct the date & time if necessary).

## Un-installing the program



1. Go to the *Windows*-desktop and click **Start** on the taskbar.
2. Click **Settings** on the menu.

3. Click **Control Panel**.

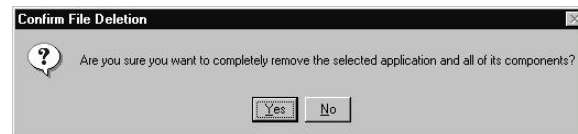
4. In the *Control Panel* window, double click the **Add/Remove Programs** icon.



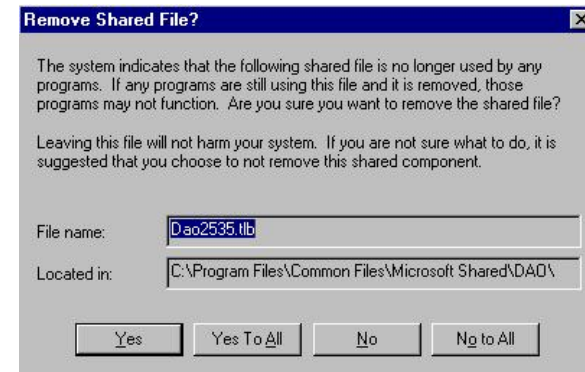
5. In the *Add/Remove Programs Properties* window find **ASCO TSSP** on the *Install/Uninstall* tab.



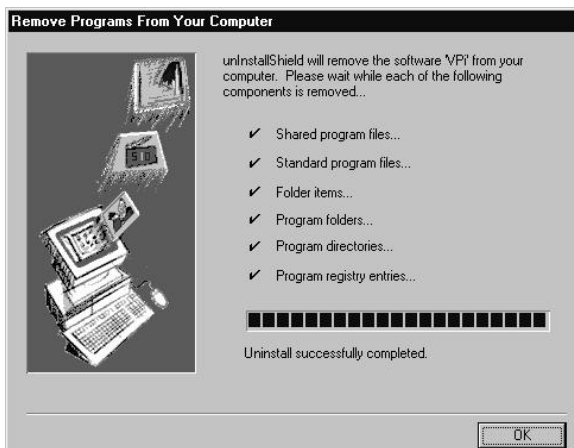
To start uninstall, select *ASCO TSSP* and click to proceed. You will be asked to confirm the file deletion process.



If you want to proceed click **Yes**, otherwise click **No** to cancel.



6. Click **No to All**.
7. After the *UnInstallShield* removes the program it displays *Uninstall successfully completed*. Click **OK**.
8. Close the **Add/Remove Programs** and **Control Panel** windows.
9. Restart the PC after this procedure. You do this by going back to the desktop and click **Start** on the taskbar.



10. In the **Start** menu, click **Shut Down**. In the **Shut Down**

*Windows* dialog box click **Restart the computer**.

Click **OK** to restart.

## How to Establish Communication with the Thin Web Server via Ethernet Connection

To set up the Thin Web Server via Ethernet connection, follow this procedure.

Required items:

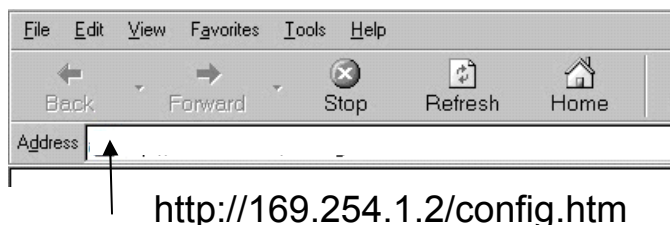
- Portable laptop computer with network card, running *Windows Xp*, *Windows 2000*, or *Windows NT*, and *Windows Internet Explorer 5.0* + installed.
  - Ethernet crossover network cable (part no. 629590-006)
1. Directly connect the specified Ethernet crossover cable between your laptop's Ethernet jack and the deenergized Thin Web Server port LAN1 (page 1-1)
  2. Refer to the **section 8** and select the appropriate *TCP/IP Installation & Configuration* instructions for your laptop computer's operating system. This procedure sets up your laptop computer (if necessary) for network connections and tests communications to the Thin Web Server.
  3. After you have confirmed communication with the Thin Web Server, continue to the next page to view and change the configuration of the Thin Web Server.

Now view and change the configuration (next column)

## How to View & Change Configuration Page from the Thin Web Server

To view and change configuration pages on a client computer, follow these steps:

1. Be sure that your computer is connected to the network.
2. Start *Microsoft Internet Explorer* browser on computer.
3. In the address bar, type in the address of the Thin Web Server, add `/config.htm`, press *Enter* :



4. Type in the *User name* and the *Password* and click **OK**.



| TCP Configuration  |                      |                      |
|--|----------------------|----------------------|
| IP Address   | Subnet               | Gateway              |
| <input type="text"/>   | <input type="text"/> | <input type="text"/> |
| Note: Make sure to keep 3 digits per octet field, i.e. 100.001.002.003 |                      |                      |
| Outgoing Mail Server <input type="text"/>                              |                      |                      |
| <input type="checkbox"/> SMTP Login Authorization Enabled              |                      |                      |
| Username <input type="text"/>  |                      | <input type="text"/> |
| Password <input type="text"/>  |                      | <input type="text"/> |
| Security Configuration   |                      |                      |
| Username   | Password             | Level                |
| <input type="text"/>   | <input type="text"/> | 1 ▾                  |
| <input type="text"/>   | <input type="text"/> | 1 ▾                  |
| asco   | fpnj                 | 1 ▾                  |
| <input type="text"/>   | <input type="text"/> | 1 ▾                  |
| admin  | admin                | 3 ▾                  |
| Company Information  |                      |                      |
| Site Name <input type="text"/>   |                      |                      |
| Company Name <input type="text"/>                                      |                      |                      |
| Street <input type="text"/>  |                      |                      |
| City <input type="text"/>  |                      |                      |
| State <input type="text"/>   |                      |                      |
| Zip <input type="text"/>   |                      |                      |
| Contact Person <input type="text"/>                                    |                      |                      |
| Phone Number <input type="text"/>                                      |                      |                      |
| Email Address <input type="text"/>                                     |                      |                      |
| Site Description <input type="text"/>                                  |                      |                      |
| Protocol Configuration   |                      |                      |
| ASCOBUS Protocol Support   |                      |                      |
| <input type="checkbox"/> COM4 enabled                                  |                      |                      |
| Modbus Protocol Support  |                      |                      |
| <input type="checkbox"/> Serial RS485 Modbus RTU                       |                      |                      |
| <input type="checkbox"/> TCP/IP OPEN Modbus at TCP port 502            |                      |                      |
| EMCP Protocol Support  |                      |                      |
| <input type="checkbox"/> EMCP-CCM Serial RS232 at COM2                 |                      |                      |
| <b>Save</b>  |                      | <b>Exit</b>          |

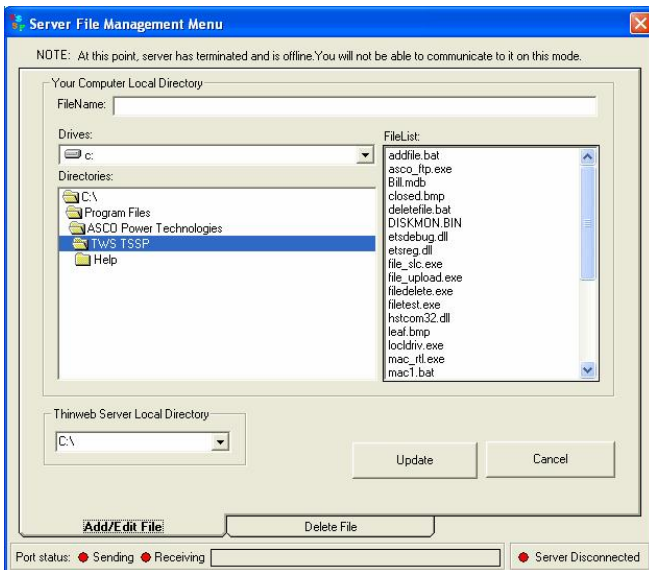
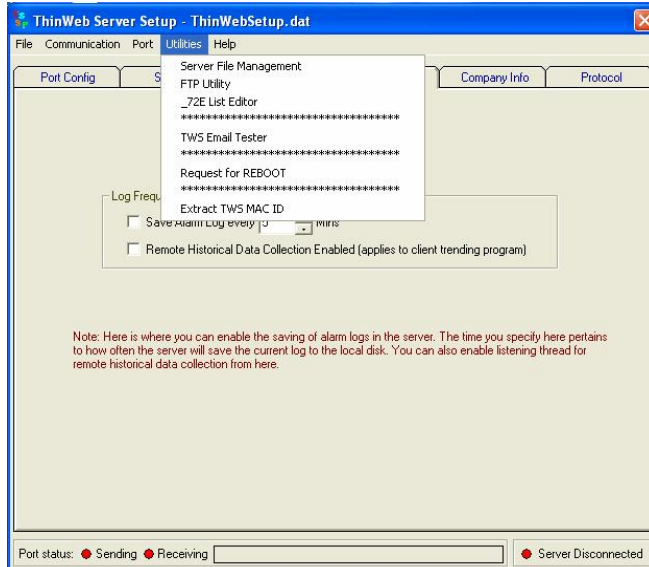
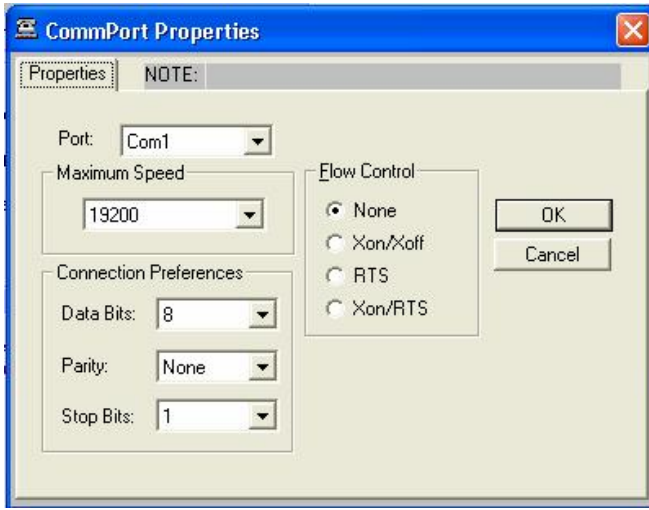
5. Fill in the IP address, subnet, and gateway.
6. Enter up to 5 Users (include yourself), their Passwords, and their Levels ( you are level 3). The Access Levels are:
  - 1 is monitor only (data page viewing only)
  - 2 is monitor and control (can transfer ATS loads)
  - 3 is administrator (assigns users and able to change TWS configuration settings)
7. Fill in the **Company Information**.
8. Click the **Protocol Configuration** that you want to use for ASCO devices and for third party device interface. If COM4 is being used, check that box.
9. Click **Save** to retain all your settings !

After saving your settings, close *Internet Explorer*. Then turn off the Thin Web Server and disconnect the cross-over cable.

**NOTE** The next time you revisit this page you will have to use the latest IP Address of the system. Hence:  
[http:// Latest-IP-Address /config.htm](http://Latest-IP-Address/config.htm)

The Thin Web Server must be previously configured using TSSP before you can use this proces

## How to copy, delete, and view files in the *Thin Web Server* ( to update firmware, to update documentation )



Two file management utilities are included on the install CD. One is for Serial connection and the other is for Ethernet use.

### Serial Connection

1. Connect the downloading serial cable between the TWS and your computer. Be sure that the proper COM port property settings are in effect.

2. Double click the icon on the *Windows* desktop to start the TWS software. On the menu bar click **Communication**, then select **Connect to the Server**. When the TWS is connected the bottom right corner light turns green *Server Connected*. On menu bar click **Utilities** then **Server File Management**.



3. Choose *Yes* on all prompts. Listen for a series of low beeping sounds after the last prompt (this indicates the TWS is in the debug mode).

4. The **Add / Edit File** screen displays. Here you will be able to transfer files from the local computer's disk/directory (source) to the TWS's disk (destination).

5. To do this, locate and select the file from your local computer directory listing (file is highlighted when selected). Then select the target destination path in the TWS where you want the file to be transferred. Choose either C:\ or C:\HTML.

6. Click the **Update** button to start the process. A DOS window opens. Let the process complete; do not interrupt it. When finished, the DOS window will close (with a series of beeping sounds).

7. You can review the current directory list of the TWS. To do this click the **Delect File** tab (bottom of screen), then click the **View Server Disk** button to start the process. A DOS window opens. Let the process complete; do not interrupt it. The first page of TWS files displays; press any key to display the next page of files. After the last page, the DOS window will close (with a series of beeping sounds).

8. You can also delete a file from the TWS directory. First, you should know exactly what and where the location of file that you wish to erase (step 7 helps you verify and locate the file). To erase the file, type in the complete source path and file name in the *FileName* text box. Two examples are shown below:

Example 1: C:\alarm.bin

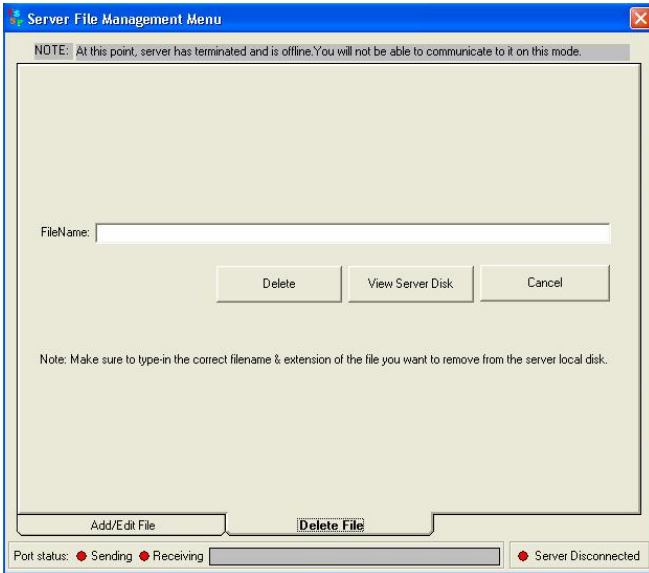
This is an alarm log file in the root directory.

Example 2: C:\HTML\yel.gif

This is a file in the HTML subdirectory.

continued on next page





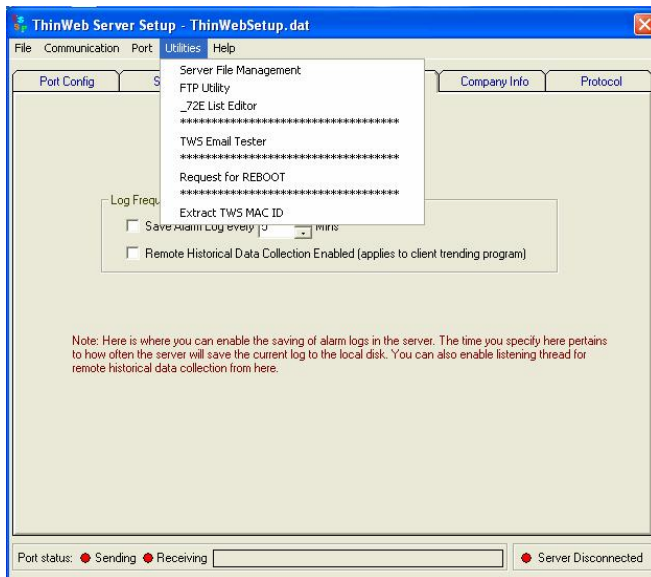
9. To start the file delete process click the **Delete** button once. A DOS window opens. Let the process complete; do not interrupt it. When finished, the DOS window will close (with a series of beeping sounds).
10. When finished, click the **Cancel** buttons to return to the main screen. On the menu bar click **Communication** then **Disconnect from the Server**.
11. Reset the TWS. Insert a pin or paper clip into the hole marked *RESET* (top center); or disconnect power supply plug to the TWS for 15 seconds, then reconnect it.

### Ethernet Connection

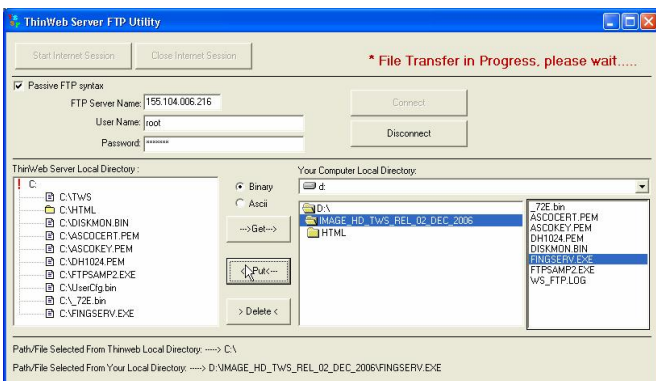
1. The computer must be connected to the same network as the TWS. See Section 6, How to create an Ethernet TCP/IP network connection (select either *Windows 2000* or *XP*).
2. Double click the icon on the *Windows* desktop to start the TWS software. On the menu bar click **Communication**, then select **Connect to the Server**. When TWS is connected the bottom right corner light turns green *Server Connected*. On menu bar click **Utilities** then **FTP Utility**.



**CAUTION**  
Be sure that you are certain of file(s) to delete in the following procedure.



3. Click the **Start Internet Session** button (top left) once. Type the TWS IP Address in the FTP Server Name text box. Type the username and password listed below:  
 username: guest password: guest  
 username: asco password: asco  
 NOTE: Select the **Passive FTP syntax** checkbox .
4. Click **Connect** to start connection to the TWS FTP server. Once connected, the screen left pane shows the current TWS directory resources. The right pane shows your local computer directory resources.
5. To transfer a file from the TWS to the local computer, locate and select the file from the TWS directory listing (file will be highlighted). Next, on the local directory list, locate the path and directory you want the file to be copied to. Then select the **Ascii** option button for a text file, or select the **Binary** option button for all other files. Now, click the **Get** button to start the transfer.

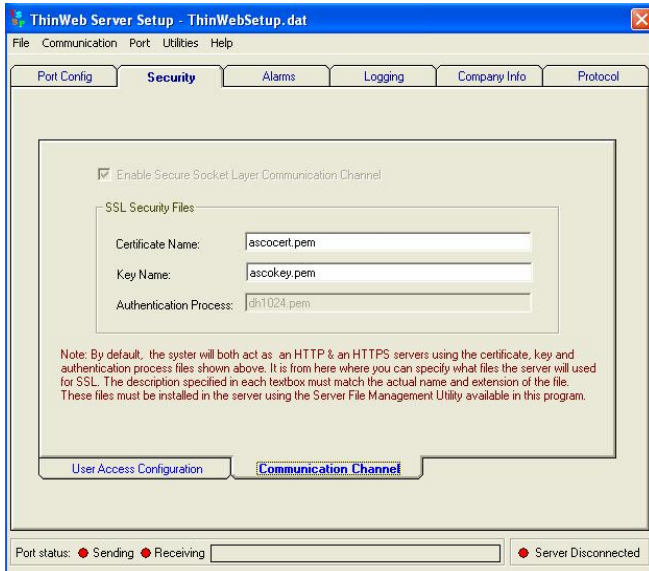


6. To transfer a file from the local computer to the TWS, locate and select the file from your local computer directory listing (file will be highlighted). Next, on TWS directory list, locate the path and directory you want the file to be copied to. Then select the **Ascii** option button for a text file, or select the **Binary** option button for all other files. Click the **Put** button to start the transfer.
7. To delete a file from the TWS directory, follow a similar procedure (as above), but click the **Delete** button once. This applies to the TWS directory.
8. When finished, click the **Disconnect** button, click the **Close Internet Session** button, then close window.



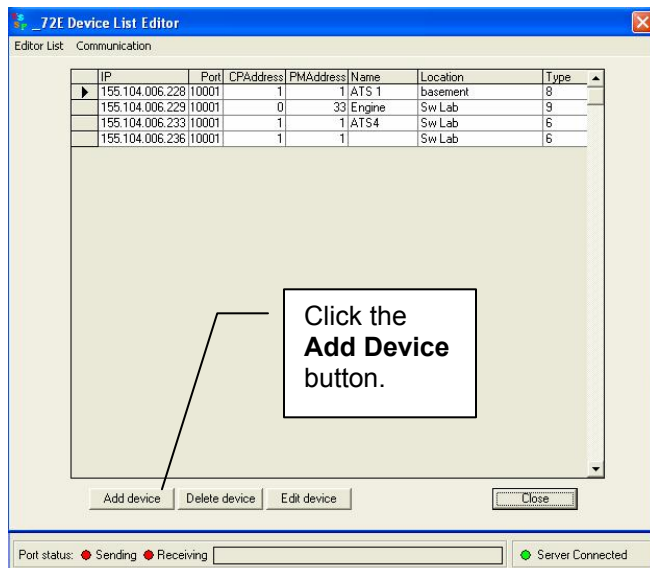
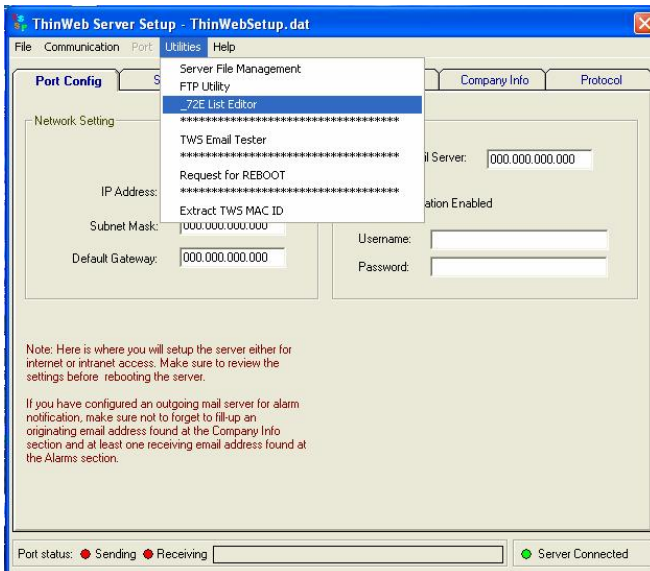
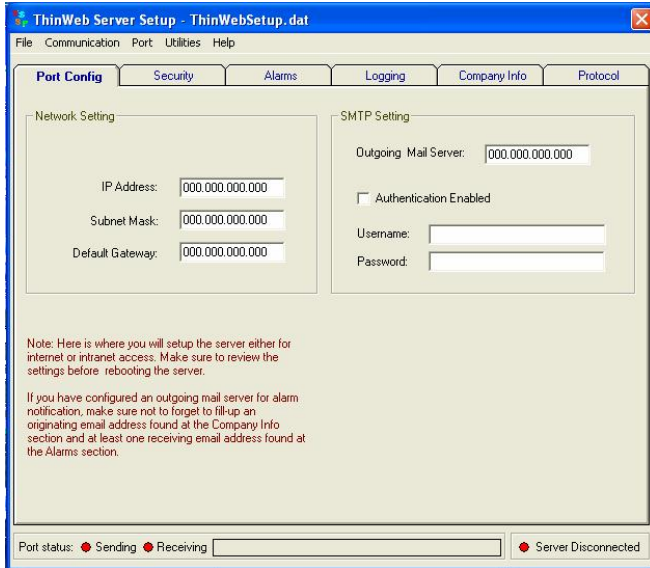
## How to install SSL certificate and private key files in the *Thin Web Server*

Both the certificate and private key files have to be installed in the Thin Web Server root directory C:\.



1. Start the Thin Web Server setup program and connect to the server. Once connected, choose whatever utility is more convenient for your setup to perform file transfer. You can use the server setup program's file management or FTP utility to transfer these files from a source location to the Thin Web Server disk. See Chapter 5.
2. After transferring the files, close the server setup program and reset the Thin Web Server.
3. After rebooting, restart the server setup program and go to the security page. Choose the **Communication Channel** tab (screen shown at the left).
4. From this page, fill in the filenames with extensions of the certificate and private key files you just transferred to the Thin Web Server disk in step 2.
5. Save the current configuration through the File header menu.
6. Next, connect to the server. Once connected, do the upload process.
7. After upload, disconnect from the Thin Web Server, close the application, and reboot the Thin Web Server.

## Connectivity Module Configurator Program

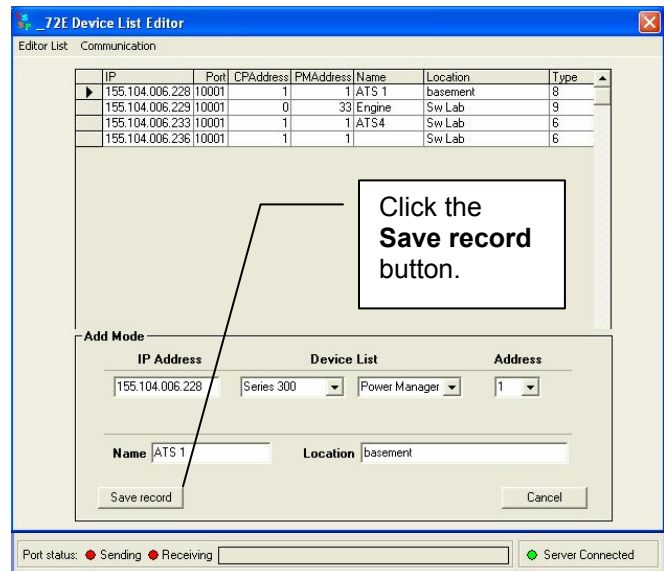


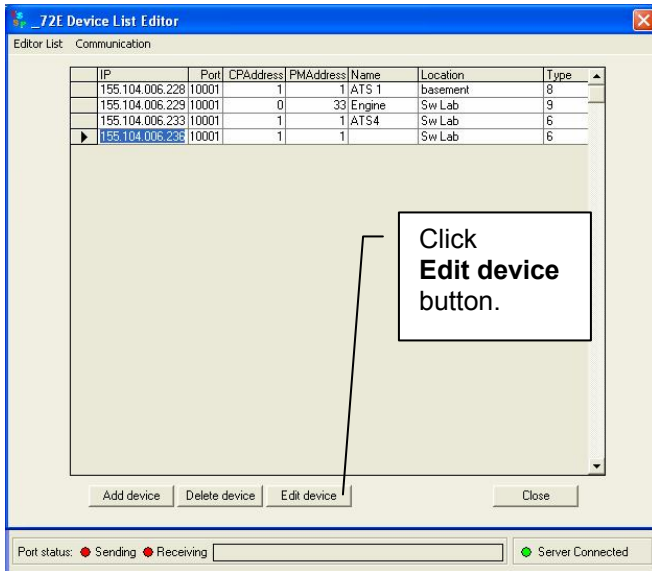
This utility is used to create, manage, upload, and download configuration settings to ASCO Connectivity Modules (only part no. 629800-xxx) that the Thin Web Server will be communicating with over LAN.

### How to Add Configuration Setting for a Connectivity Module (Accessory 72E)

1. Launch the Thin Web Server setup program.
2. Connect to the Thin Web Server by clicking **Communication**, then **Connect to Server**. The indicator (bottom right corner) will turn from red to green.
3. On menu bar click **Utilities** then **\_72E List Editor**.
4. The **\_72E Device List Editor** screen displays.
5. Click the **Add Device** button.
6. Set the IP Address, the type of Controller, Power Manager, and the address of the devices here. Note that there is only one item pertaining to the device address. This means that both devices must be set with the same address when connected to the Connectivity Module.
7. Click the **Save record** button to save your setting or **Cancel** if you want to discard the changes you made.

continued on next page





### How to Edit Configuration Setting

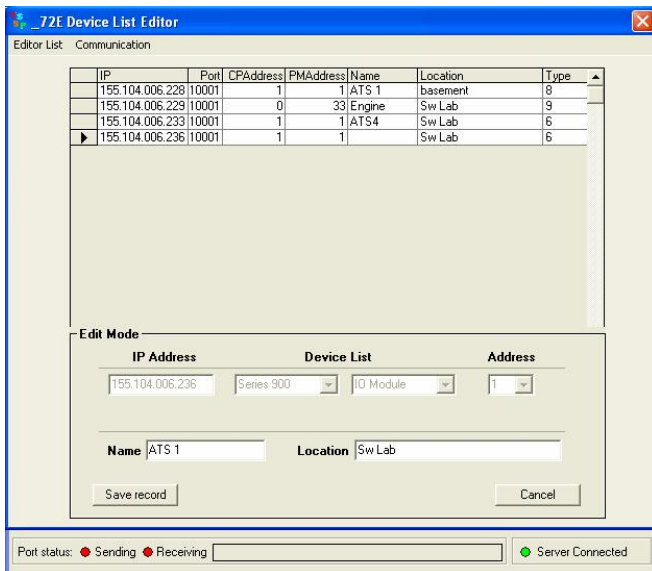
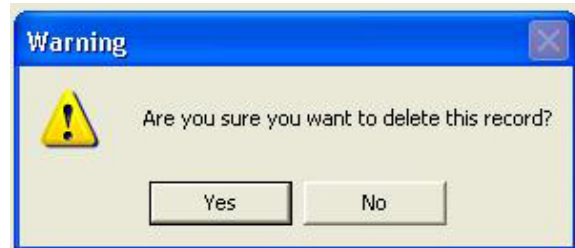
1. Set the pointer to the configurator setting that you want to edit and then click **Edit device** button.
2. Edit mode only allows modification of name and location descriptions of ATSS with Group 1 Controller (Series 300) and Group 6A/7A Control Panels (ASCO 940, 962, 436, 434, 447, 448).
3. When you attempt to edit settings for ATSS with Group 5 Controller (4000 Series, 7000 Series) you will get this message. Click **OK** to continue.



4. After editing click **Save record** button.

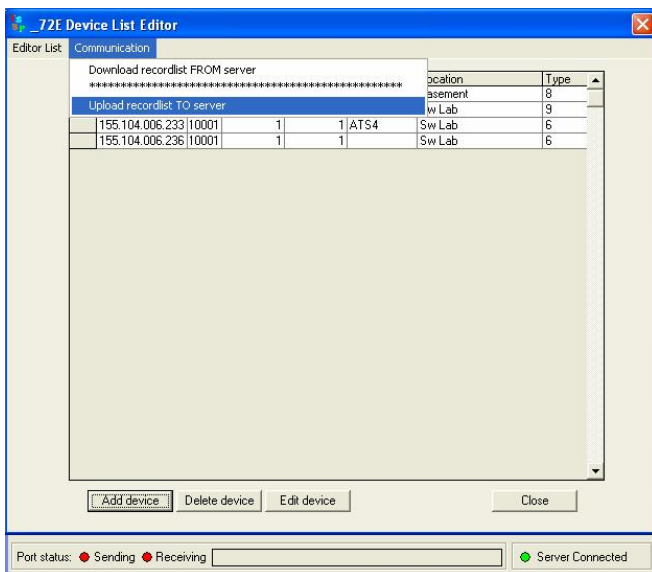
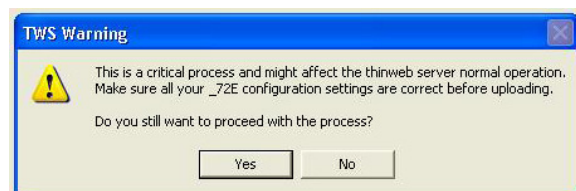
### How to Delete Configuration Setting

1. Set the mouse pointer to the IP Address that you want to delete and then click the **Delete device** button. Click **Yes** to proceed with the delete operation or **No** to keep it.

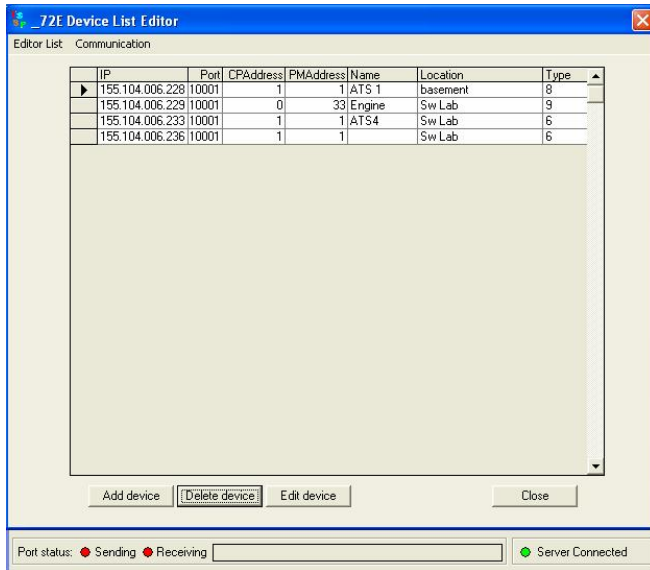


### How to Upload Configuration Setting

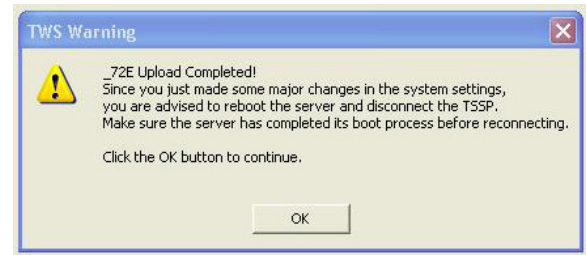
1. On the menu bar click **Communication** then click **Upload recordlist TO server**.
2. Click **OK** to proceed with the process or **Cancel** to terminate.
3. Server will perform the upload process. This will take a while, so please wait until a completion message is displayed.



continued on next page



- When the process is done this message should appear. Click **OK** to continue. If message does not appear (wait), close the application and redo the process

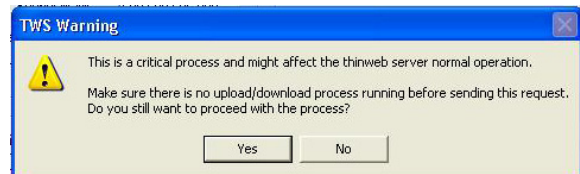


again.

## Other Utilities

### How to Reset Thin Web Server Serially

- Launch the Thin Web Server setup program and connect it to the Thin Web Server.
- On the menu bar click **Utilities**, then click **Request for REBOOT**.



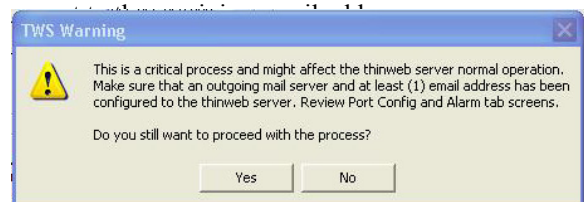
- Click **Yes** to continue or **No** to cancel operation.

### How to Test Email Feature

- Make sure the following information is already configured in the server.
  - Outgoing Mail Server Email Address
  - At least one receiving email address
  - Originating Email Address

You can download configuration to confirm these settings in the server.

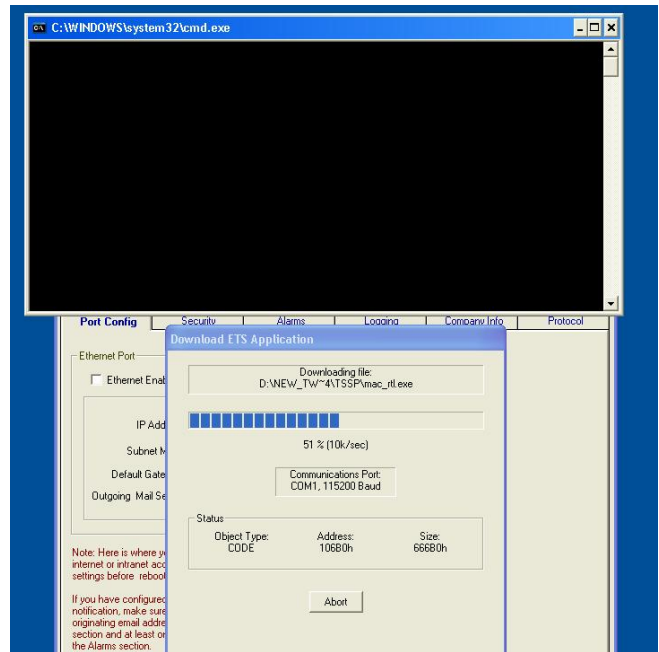
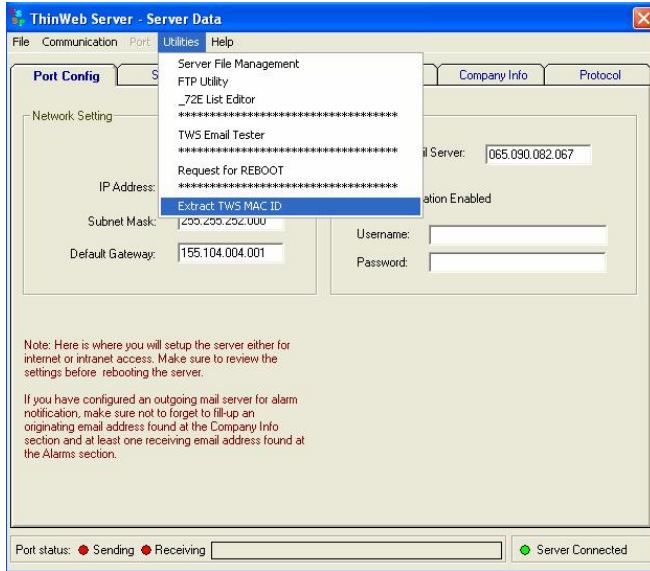
- Launch the Thin Web Server setup program.
- Connect to the Thin Web Server by clicking **Communication**, then **Connect to Server**. The indicator (bottom right corner) will turn green.
- On menu bar click **Utilities** then **TWS Email Tester**.
- Click **Yes** to continue or **No** to cancel. You must hear a series of ring sound coming from the TWS which indicates that the email was sent. Verify that the email



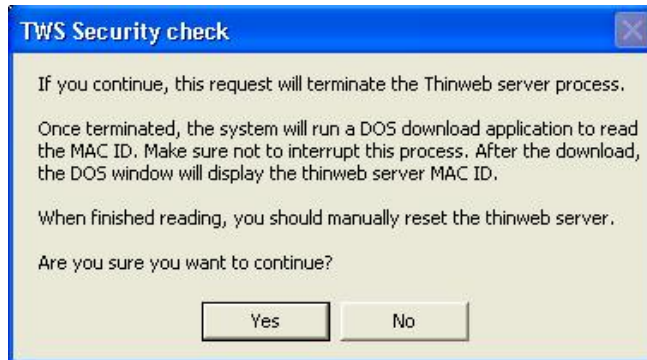


### How to View the TWS MAC Address

1. Launch the Thin Web Server setup program and connect it to the Thin Web Server.
2. On the menu bar, click **Utilities**, then click **Extract TWS MAC ID**.
4. This will bring the Thin Web Server to the debug mode. Shortly after, the DOS prompt window will appear which initiates the down-loading process.



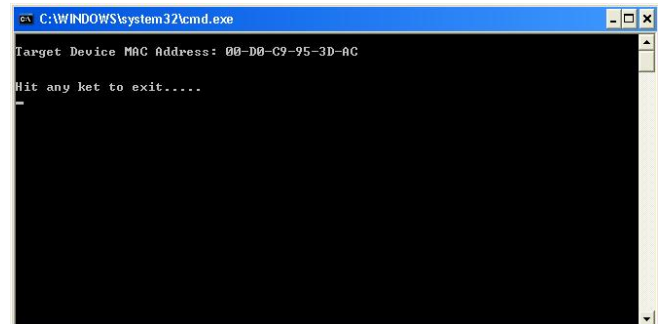
3. This will post the message window as:



Click **Yes** to continue.

Make sure not to interrupt the process.

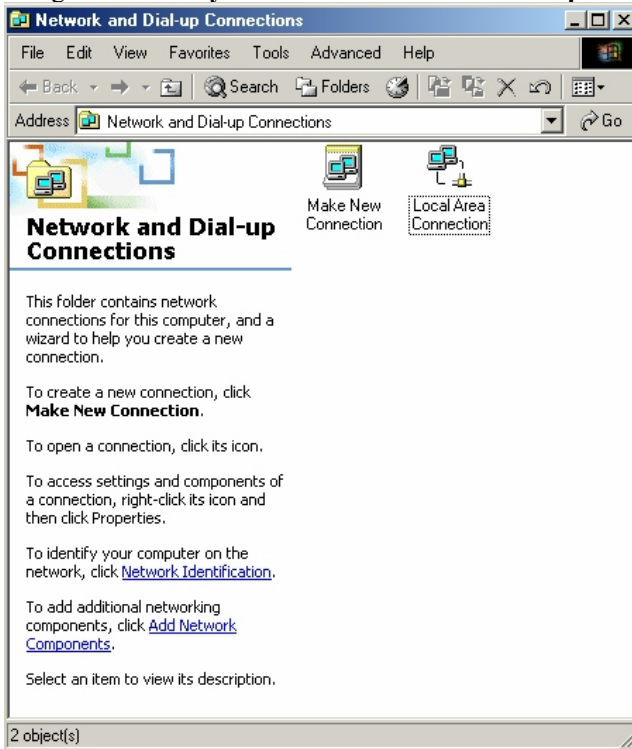
5. After the download, the DOS window will display the Thin Web Server MAC ID.



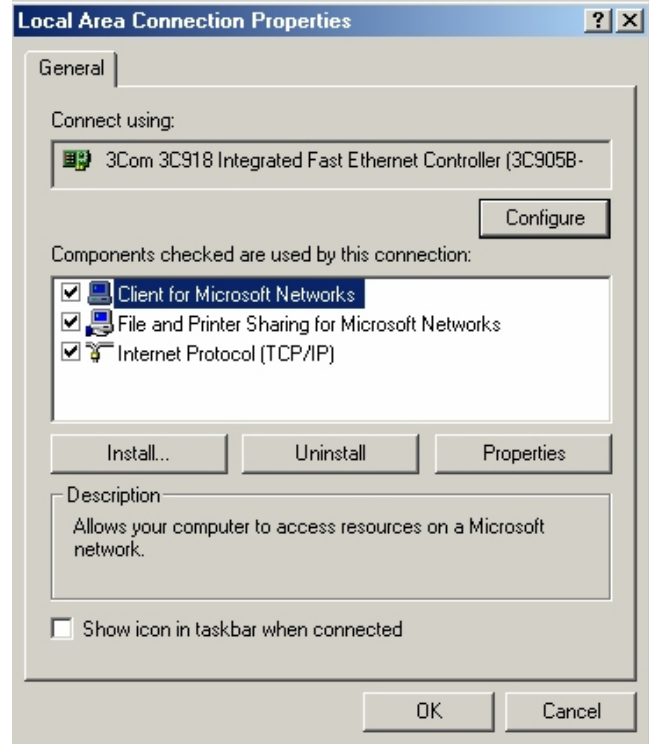
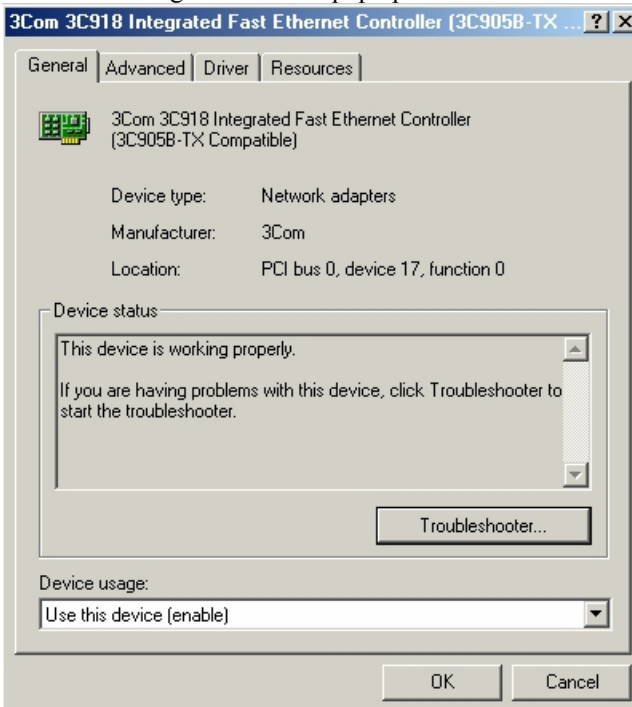
6. When done viewing, click any key to close the window.
7. Reset the Thin Web Server.

## How to create an Ethernet TCP/IP network connection on a Windows® 2000® PC

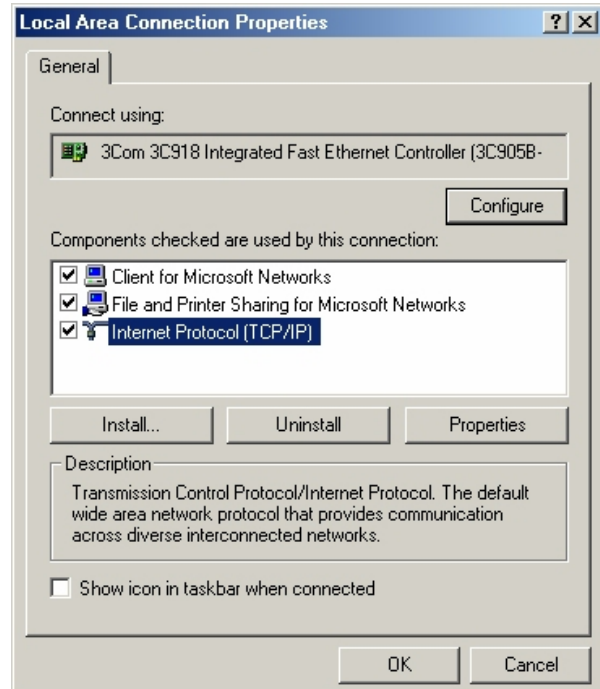
1. Right click on **My Network Places** then click **Properties**.
3. If the device status indicates *This device is working properly*, close this window and proceed to the next step. Otherwise follow the instructions as indicated in the **Troubleshooter** help to fix the problem.



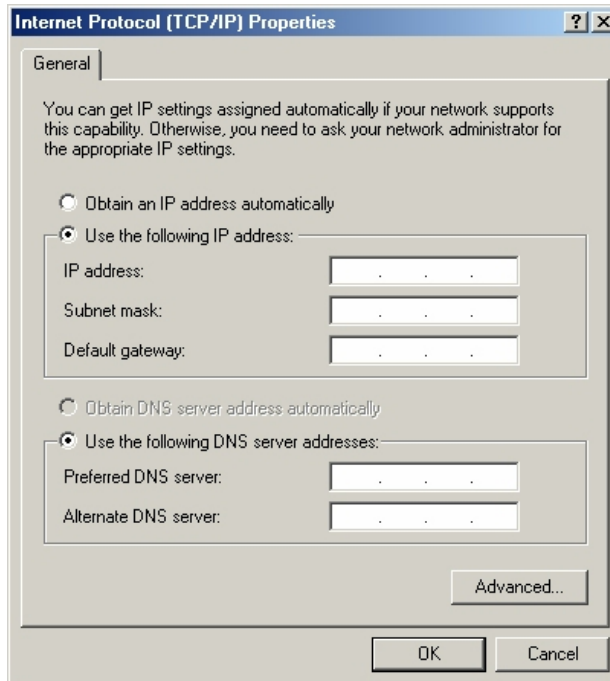
2. Right click on **Local Area Connection** icon. The following window will pop up.



4. Click on **Configure** icon to verify installation of the Ethernet card.



5. Install Internet Protocol by clicking on Install button.  
If already installed highlight **Internet Protocol (TCP/IP)** and click on **Properties**.



6. If your PC is on the company network contact your IT personnel for appropriate settings. If you are connecting to an ISP using DSL or cable modem contact your service provider for the settings.
7. If you have created a dedicated local area network to connect to the Thin Web Server this is where you have to enter a unique IP number for your PC. For example if

**Thin Web server IP configuration is:**

**IP no. : 169.254.001.002**  
**Subnet: 255.255.255.0**  
**Gateway: 0.0.0.0**

**Computer IP configuration will be:**

**IP no. : 169.254.001.003**  
**Subnet: 255.255.255.0**  
**Gateway: 0.0.0.0**

**Note:**

Once the TCP/IP setup is complete at the PC it is preferred to re-boot the PC.

8. To verify if the Ethernet connection between the PC and the Thin Web Server is working click on the following:

*Start > Programs > Accessories > Command Prompt*

On the command prompt type:

`C:\>ping 169.254.001.002`

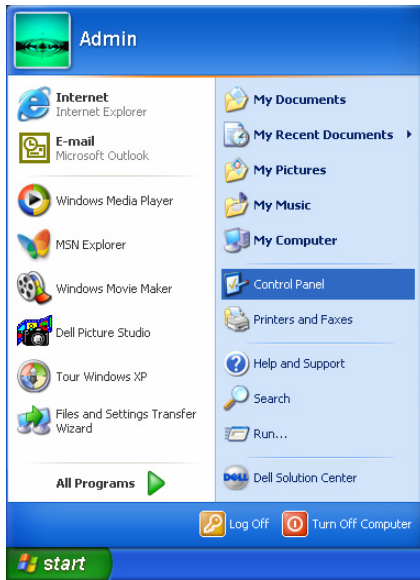
(If IP address of the Thin Web server is as listed in the example otherwise replace it with the new assigned one).

9. To see the PC's IP settings type: `C:\>ipconfig`

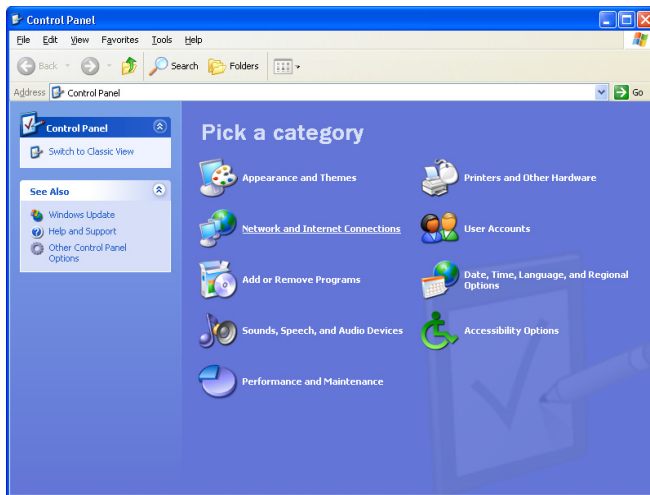
**Note:**

The network administration determines the IP Address numbers and Subnet Mask numbers.

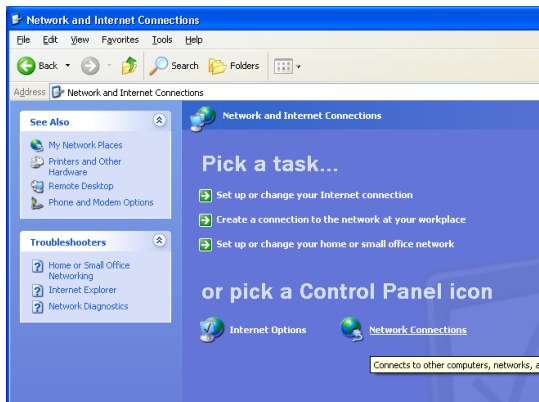
## How to create an Ethernet TCP/IP network connection on a Windows® XP® PC



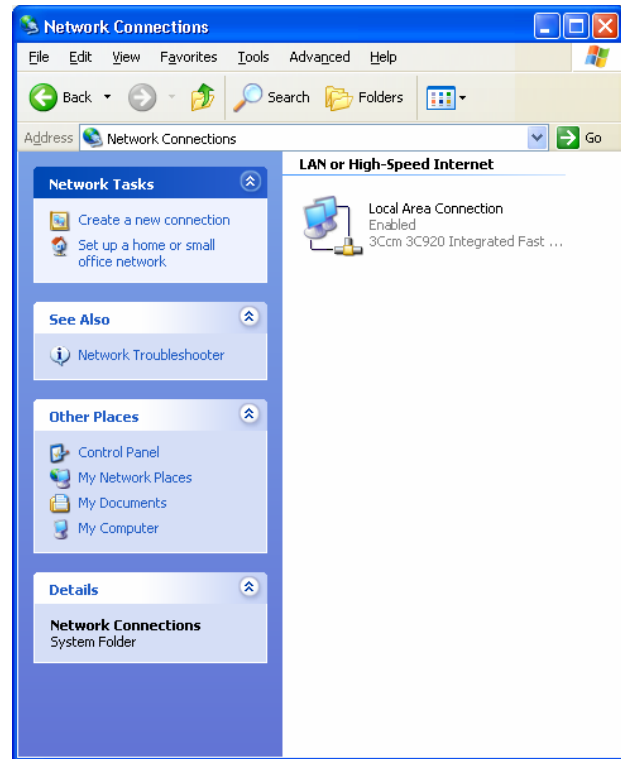
1. Click **start** (lower left corner) and select **Control Panel**.



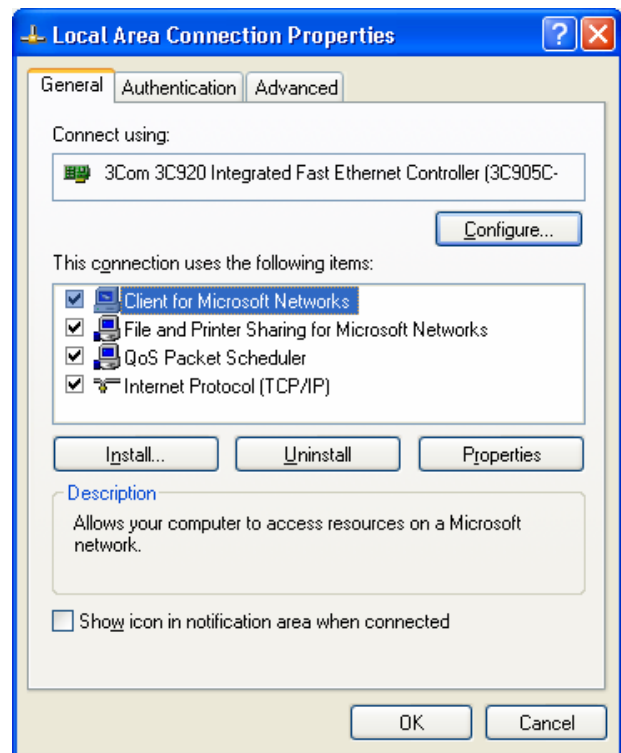
2. Click the **Network and Internet Connections** icon.



3. Click on **Network Connections**.



4. Right click on **Local Area Connection** icon. The following window will pop-up.

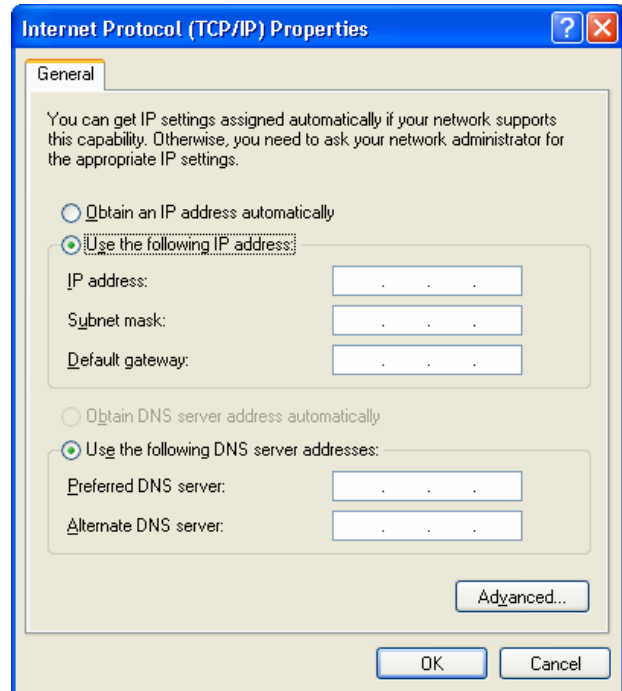


5. Click on **Configure** icon to verify installation of the Ethernet card.





6. If the device status indicates *This device is working properly*, close this window and proceed to the next step. Otherwise follow the instructions as indicated in the **Troubleshooter** help to fix the problem.



8. If your PC is on the company network contact your IT personnel for appropriate settings. If you are connecting to an ISP using DSL or Cable modem contact your service provider for the settings.

If you have created a dedicated local area network to connect to the Thin Web Server this is where you have to enter a unique IP number for your PC. For example if

#### Thin Web server default IP configuration is:

**IP no. : 169.254.001.002**  
**Subnet: 255.255.255.0**  
**Gateway: 0.0.0.0**

#### Computer IP configuration will be:

**IP no. : 169.254.001.003**  
**Subnet: 255.255.255.0**  
**Gateway: 0.0.0.0**

**Note:** Once the TCP/IP setup is complete at the PC it is preferred to re-boot the PC.

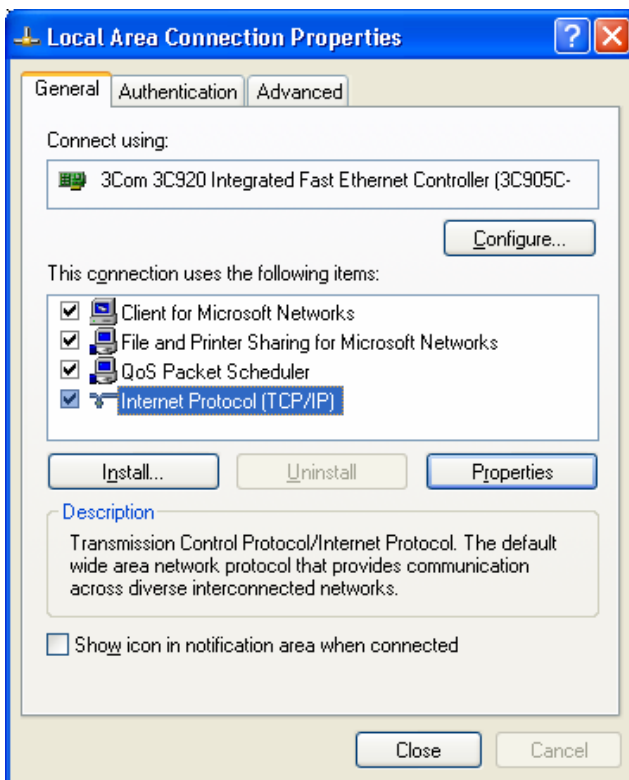
9. To verify if the Ethernet connection between the PC and the Thin Web Server is working click on the following:

*Start > Programs > Accessories > Command Prompt*

On the command prompt type:

```
C:\>ping 169.254.001.002
```

(If IP address of the Thin Web server is as listed in the example otherwise replace it with the new assigned one).



7. Install Internet Protocol by clicking on **Install** button. If already installed highlight **Internet Protocol (TCP/IP)** and click on **Properties**.

10. To see the PC's IP settings type: `C:\>ipconfig`

## Troubleshooting

| Symptom  | Possible Problem        | Possible Cause   | Action  | Prevention  |
|--|-------------------------|--|---|---|
| 1. Thin Web server (TWS) does not turn ON.   | .                       | .  | <ul style="list-style-type: none"> <li>– Check if you have the correct power supply.</li> <li>– Make sure the plug is connected properly to the supply outlet.</li> </ul>   |   |
| 2. Thin Web Server keeps rebooting.<br><br>NOTE: You should hear a series of beep sounds to indicate the TWS is scanning. When it completes the process you will hear a ring sound similar to a cell phone ring. | Corrupted usercfg.bin   | <ul style="list-style-type: none"> <li>– Interrupted configuration upload.</li> <li>– TSSP and TWS versions mismatch.</li> </ul>                                       | <ul style="list-style-type: none"> <li>a. Connect a PS2 keyboard to the TWS.</li> <li>b. At the next reboot, press the <b>u</b> key intermittently.</li> <li>c. When you hear a ring sound, this will indicate that the usercfg.bin file of the TWS has been erased.</li> <li>d. You should then reset the TWS manually from here.</li> <li>e. Once it reboots, rerun your TSSP, check all your settings and download again.</li> <li>f. Reset the TWS after download.</li> <li>g. Repeat steps b – f if necessary until symptom is resolved.</li> </ul> <p>NOTE: If symptom persists after repeating this procedure several times, the TWS may be damaged. Contact ASI for service.</p>                | <ul style="list-style-type: none"> <li>– Make sure that the version of the TSSP and TWS firmware are the same.</li> <li>– Unload old version of the TSSP you're your computer first, then install the new version before using it with the TWS.</li> <li>– Make sure to allow the system to complete the down-load process before doing any tasks.</li> </ul> |
| 3. Corrupted 72E IP address list after downloading 72E list at TSSP.   | Corrupted _72Ebin file. | Interrupted configuration upload.  | <ul style="list-style-type: none"> <li>a. Connect a PS2 keyboard to the TWS.</li> <li>b. At the next reboot, press the <b>e</b> key intermittently.</li> <li>c. When you hear a ring sound, this will indicate that the _72Ebin. file of the TWS has been erased.</li> <li>d. You should then reset the TWS manually from here.</li> <li>e. Once it reboots, rerun your TSSP, check all _72E record settings and download again to the TWS.</li> <li>f. Reset the TWS after download.</li> <li>g. Repeat steps b – f if necessary until symptom is resolved.</li> </ul> <p>NOTE: If symptom persists after repeating this procedure several times, the TWS may be damaged. Contact ASI for service.</p> | Make sure to allow the system to complete the down-load process before doing any tasks.   |
| 4. No response from TWS after power is applied. Normally you should hear a beep sound to indicate that the system is scanning for ASCO device.   | TWS is not rebooting..  | <ul style="list-style-type: none"> <li>– Hard disk damaged in TWS from mishandling.</li> <li>– Disk file corruption from incomplete file transfer / upward.</li> </ul> | <ul style="list-style-type: none"> <li>– Power fluctuation.</li> <li>– Incorrect supply applied to TWS.</li> </ul>  | Call ASI for assistance.  |

| Symptom   | Possible Problem                                | Possible Cause   | Action   | Prevention   |
|---|---|--|--|--|
| 5. TWS booted but no client or browser can not connect to it. | TWS is not connected to LAN.                    | <ul style="list-style-type: none"> <li>- LAN cable is damaged or not properly plugged into the TWS.</li> <li>- LAN cable is not connected to LAN1 port of the TWS.</li> <li>- No TCP/IP IP, subnet, gateway assigned to the TWS.</li> <li>- The hub's uplink mode must be enabled at all times.</li> </ul>   | <ul style="list-style-type: none"> <li>- Make sure the connection between the TWS and the LAN is done properly and secured.</li> <li>- Use LAN1 port of the TWS for LAN connection. LAN2 port must never be used.</li> <li>- If suspicious of the LAN cable RJ45, use a cross-over cable to connect the TWS with the client station.</li> <li>- Make sure the TSSP was used to configure the TWS TCP/IP settings. After any configuration download by the TSSP, make sure to re-download the configuration from the TWS to make sure that the configuration data was uploaded properly to the TWS.</li> <li>- Make sure that both the subnet and gateway addresses of the TWS and the client stations are the same.</li> </ul> | <ul style="list-style-type: none"> <li>- Strictly follow the connection diagram discussed in this Installation Manual when connecting the TWS.</li> <li>- Make sure you have run the TSSP first to configure the TWS before attempting to connect to it through a client station.</li> <li>- If the TWS is installed in an existing LAN, make sure you only assigned IP, subnet, and gateway addresses to the TWS given to you by the LAN administrator.</li> <li>- Make sure the client station is also connected to the TWS.</li> <li>- You can use the <b>ping</b> application which is a resident DOS utility in your client station to verify connection to the TWS.</li> </ul> |
| 6. TWS booted but found no serial ASCO devices.               | Devices were not properly connected to the TWS. | <ul style="list-style-type: none"> <li>- Device incorrect wiring.</li> <li>- 72As not functioning.</li> <li>- Break in the line somewhere in the daisy-chained connection.</li> <li>- Damaged TWS connectors.</li> <li>- Disabled COM4 communication.</li> <li>- Devices are not configured properly – protocol &amp; baud rate.</li> <li>- Damaged TWS COM3 or COM4 RS485 ports.</li> </ul> | <ul style="list-style-type: none"> <li>- Check the connection of the daisy-chained network of device to the TWS. Serial daisy-chained network must be connected only to COM3 &amp; activated COM4 of the TWS.</li> <li>- Check connection between 72As.</li> <li>- Check TTL connections of devices to the 72As.</li> <li>- Install a repeater for daisy-chain interconnect exceeding 4000 feet.</li> <li>- Install terminating resistor at the last 72A node of the daisy-chain network to avoid noise and signal loss.</li> <li>- Make sure to call for ASI for assistance when symptoms become apparent and conditions worsen.</li> </ul>   | <ul style="list-style-type: none"> <li>- Strictly follow the connection diagram discussed in this Installation Manual when connecting the TWS.</li> <li>- Make sure all the ASCO devices are configured properly.</li> <li>- Follow recommended remedies to avoid noise and signal loss on networks exceeding required distance or installed in extreme environments.</li> </ul>   |

| Symptom   | Possible Problem   | Possible Cause   | Action   | Prevention   |
|---|--|--|--|--|
| 7. TWS booted but cannot communicate to any remote 72E. | TWS is not connected to LAN.<br>72Es are not connected to the LAN. | <ul style="list-style-type: none"> <li>– Check first if any client station within the LAN can communicate with the TWS. User can try to ping the TWS from the client station. If you get no response, solve this address problem before proceeding.</li> <li>– If your client station is able to ping the TWS, then you might need to rerun your TSSP and try downloading from the 72E list records. Make sure there are uploaded 72E IP addresses to the TWS.</li> <li>– The 72Es that the TWS is attempting to talk to are not configured properly to the LAN and may be connected to a different LAN.</li> <li>– If the TWS and the 72Es are connected locally through a hub, make sure the hub is powered ON and can support 10/100 Mbps devices.</li> </ul> | <ul style="list-style-type: none"> <li>– Run your TSSP, and verify saved 72E record lists. Make sure the addresses you assigned in the list are addresses given to you by the LAN administrator. These addresses are the actual addresses used by the remote 72Es the TWS will be communicating to.</li> <li>– After every upload, make sure to download the configuration to make sure the data was uploaded properly to the TWS.</li> <li>– Make sure that after every download to reset the TWS for a fresh restart.</li> <li>– You can use a client station within the LAN to verify the presence of the TWS and the remote 72Es. You can do this by pinging each of them through the ping utility in DOS. Those that do not reply are the ones that cannot communicate within the LAN.</li> <li>– For 72Es not responding from your ping request from a client station, you can revisit their configuration and confirm their settings.</li> <li>– Make sure to call ASI for assistance when symptoms become apparent and conditions worsen.</li> </ul> | <ul style="list-style-type: none"> <li>– Make sure the TWS and all the remote 72Es are configured properly. They should have TCP settings assigned by the LAN administrator.</li> <li>– Follow Installation Manual 381333-238 to configure the Acc. 72Es.</li> <li>– Confirm every 72E record before uploading it to the TWS.</li> <li>– Use the correct TSSP version for the TWS. The TSSP and TWS firmware versions must be the same.</li> </ul> |
| 8. TWS reports communication error.                     | Devices were not properly connected to the TWS.                    | Same as item 6   | Same as item 6   | Same as item 6   |
| 9. TWS email date and time received are incorrect.      | System DST, date, and time are not properly setup.                 | <ul style="list-style-type: none"> <li>– Forgot to setup the DST and system time.</li> <li>– Incorrect DST setting.</li> </ul>   | <ul style="list-style-type: none"> <li>– Set the DST and system date and time accordingly.</li> </ul>  | <ul style="list-style-type: none"> <li>– The first time you configure the TWS, make sure to check and apply correct DST, system date, and time.</li> <li>– Make a monthly check for the system data and time through system configuration page to</li> </ul>   |

|                                     |   |  |   | monitor CMOS battery level.   |
|-------------------------------------|---|--|---|---|
| Symptom                             | Possible Problem  | Possible Cause   | Action  | Prevention  |
| 10. Email alarms were not sent out. | No email was received by expecting recipients when alarm happens. | <ul style="list-style-type: none"> <li>- No outgoing mail server address specified to the TWS.</li> <li>- No originating email address specified to the TWS.</li> <li>- Incorrect receiving email addresses specified to the TWS.</li> </ul>   | <ul style="list-style-type: none"> <li>- Specify an outgoing mail server address given to you by the LAN administrator.</li> <li>- Assign an originating email address to the TWS. This item is found in the Company info section of the TSSP.</li> <li>- Make sure all the receiving email addresses are correct and valid.</li> </ul>   | <ul style="list-style-type: none"> <li>- Make sure to coordinate and only use data disclosed to you by the LAN administrator.</li> <li>- Review all information first in the TSSP before saving and uploading to the TWS.</li> </ul>  |
| 11. TWS reboots during runtime.     | Intermittent system failure.                                      | <ul style="list-style-type: none"> <li>- Data collisions in the network.</li> <li>- Unknown Internal DB engine problem.</li> <li>- Hard drive problem during file saving at runtime.</li> <li>- Maximum system utilization reached, and no more resources are available to use.</li> <li>- Internal thread problem.</li> <li>- Hackers.</li> </ul> | <ul style="list-style-type: none"> <li>- System will always try to revive itself when there are unknown internal problems or restrictions not allowing it to continue its normal operation. This is to ensure that the TWS will always be available and running.</li> <li>- Contact ASI for assistance if the TWS keeps resetting for no apparent reason and cannot resume to normal operation.</li> <li>- Make sure to notify your LAN administrator if symptom persists.</li> </ul>         | <ul style="list-style-type: none"> <li>- Give access only to known personnel.</li> <li>- Make sure that the TWS has a unique IP address in the LAN.</li> <li>- Check the content of the log directory to keep track of the history of the system from its last reboot.</li> <li>- Keep in touch with ASCO Power Technologies for new releases and service packs.</li> </ul> |
| 12. TSSP cannot connect to TWS.     | No connection between the computer and the TWS.                   | <ul style="list-style-type: none"> <li>- Incorrect serial cable used.</li> <li>- TSSP was not configured to the right port being used.</li> <li>- Damaged comm. port.</li> <li>- Damaged serial cable used.</li> </ul>   | <ul style="list-style-type: none"> <li>- Check serial connection of the client station running the TSSP and the TWS.</li> <li>- Make sure you are connected to COM1 of the TWS.</li> <li>- Check if you are using the right cable. You must use the serial cable that came with the product.</li> <li>- Configure the TSSP properly, assigning only the appropriate port and baud rate settings.</li> <li>- Use another available port.</li> <li>- Use another spare serial cable.</li> </ul> | <ul style="list-style-type: none"> <li>- Follow this Installation Manual for how to install the TWS and use the TSSP.</li> </ul>  |

| Symptom  | Possible Problem                           | Possible Cause  | Action   | Prevention  |
|--|--|---|--|---|
| 13. Server setup program cannot upload / download configuration. Receiving an error message after upload / download. | Corrupted TWS configuration file.          | – TSSP & TWS program version mismatch.  | Same as item 4   | Same as item 4  |
| 14. Serial Modbus communication is not working properly.   | Modbus master cannot communicate with TWS. | <ul style="list-style-type: none"> <li>– TWS is not serially connected properly to the Modbus master.</li> <li>– TSSP was not configured for serial Modbus communication.</li> <li>– Incorrect serial cable adapter used for this application.</li> <li>– Incorrect registers used by the Modbus master.</li> </ul> | <ul style="list-style-type: none"> <li>– Make sure to use the correct serial adapter to connect the Modbus master to the TWS.</li> <li>– Only COM2 can be used for serial Modbus communication.</li> <li>– Make sure to enable and set up serial communication to the TWS properly.</li> <li>– Make sure to use only the register maps for TWS serial Modbus communication.</li> </ul>                                   | <ul style="list-style-type: none"> <li>– Follow this Installation Manual for how to connect and implement Modbus communication in the TWS.</li> <li>– Only use TWS Modbus communication register maps in designing GUI application that will communicate to ASCO device through the TWS.</li> </ul> |
| 15. TCP/IP open Modbus communication is not working properly.  | Modbus master cannot communicate with TWS. | <ul style="list-style-type: none"> <li>– TWS was not configured for TCP/IP Modbus communication.</li> <li>– Incorrect registers and addressing scheme used by the Modbus master.</li> </ul>   | <ul style="list-style-type: none"> <li>– Make sure to enable and set up TCP/IP Modbus communication to the TWS properly through TSSP.</li> <li>– Make sure to use only the register maps for TWS TCP/IP Open Modbus communication.</li> <li>– TCP/IP Modbus communication of the TWS only renders data from serial devices connected to its COM3 &amp; COM4 ports. TWS does not render data from remote 72Es.</li> </ul> | <ul style="list-style-type: none"> <li>– Follow this Installation Manual for how to install the TWS and use the TSSP.</li> <li>– Only use TWS Modbus communication register maps in designing GUI application that will communicate to ASCO device through the TWS.</li> </ul>                      |
| 16. Needed to reset alarm logs.  |  |   | – Run your server setup program again, connect to the TWS. Go to <b>Utilities, Server File Management</b> and delete the file C:\alarm.bin. Refer to page 5-1.   |   |

## Communication Address Form

| Row No. | Name of ATS or PM | Location of ATS or PM | ATS Serial Number | ATS Catalog Number | ATS Amps | ATS Volts | Address set in ATS Controller* | Address set in Power Manager** (if provided) |
|---------|-------------------|-----------------------|-------------------|--------------------|----------|-----------|--------------------------------|--|
| 1       |                   |                       |                   |                    |          |           |                                |  |
| 2       |                   |                       |                   |                    |          |           |                                |  |
| 3       |                   |                       |                   |                    |          |           |                                |  |
| 4       |                   |                       |                   |                    |          |           |                                |  |
| 5       |                   |                       |                   |                    |          |           |                                |  |
| 6       |                   |                       |                   |                    |          |           |                                |  |
| 7       |                   |                       |                   |                    |          |           |                                |  |
| 8       |                   |                       |                   |                    |          |           |                                |  |
| 9       |                   |                       |                   |                    |          |           |                                |  |
| 10      |                   |                       |                   |                    |          |           |                                |  |
| 11      |                   |                       |                   |                    |          |           |                                |  |
| 12      |                   |                       |                   |                    |          |           |                                |  |
| 13      |                   |                       |                   |                    |          |           |                                |  |
| 14      |                   |                       |                   |                    |          |           |                                |  |
| 15      |                   |                       |                   |                    |          |           |                                |  |
| 16      |                   |                       |                   |                    |          |           |                                |  |

**Instructions:** Fill in the information for each Automatic Transfer Switch (ATS) and Power Manager (PM) connected to the network.

\* For Group 5 Controller (*4000 & 7000 Series*) refer to **User's Guide 381333-126**

\* For Group 1 Controller (*Series 300*) refer to Communication Interface Module **Instructions 381339-189**

\* For Group 7A Control Panel (*ASCO 940, 962, 436, 434, 447, 448*) refer to Accessory 72A **Instructions 381339-172**

\*\* For Power Manager Xp refer to **Operator's Manual 381333-199**. For the older Data Monitor refer to **Operator's Manual 381333-143**.



## Communication Address Form

| Row No. | Name of ATS or PM | Location of ATS or PM | ATS Serial Number | ATS Catalog Number | ATS Amps | ATS Volts | Address set in ATS Controller* | Address set in Power Manager** (if provided) |
|---------|-------------------|-----------------------|-------------------|--------------------|----------|-----------|--------------------------------|--|
| 17      |                   |                       |                   |                    |          |           |                                |  |
| 18      |                   |                       |                   |                    |          |           |                                |  |
| 19      |                   |                       |                   |                    |          |           |                                |  |
| 20      |                   |                       |                   |                    |          |           |                                |  |
| 21      |                   |                       |                   |                    |          |           |                                |  |
| 22      |                   |                       |                   |                    |          |           |                                |  |
| 23      |                   |                       |                   |                    |          |           |                                |  |
| 24      |                   |                       |                   |                    |          |           |                                |  |
| 25      |                   |                       |                   |                    |          |           |                                |  |
| 26      |                   |                       |                   |                    |          |           |                                |  |
| 27      |                   |                       |                   |                    |          |           |                                |  |
| 28      |                   |                       |                   |                    |          |           |                                |  |
| 29      |                   |                       |                   |                    |          |           |                                |  |
| 30      |                   |                       |                   |                    |          |           |                                |  |
| 31      |                   |                       |                   |                    |          |           |                                |  |
| 32      |                   |                       |                   |                    |          |           |                                |  |

**Instructions:** Fill in the information for each Automatic Transfer Switch (ATS) and Power Manager (PM) connected to the network.

- \* For Group 5 Controller (*4000 & 7000 Series*) refer to **User's Guide 381333-126**
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- \* For Group 7A Control Panel (*ASCO 940, 962, 436, 434, 447, 448*) refer to Accessory 72A **Instructions 381339-172**
- \*\* For Power Manager Xp refer to **Operator's Manual 381333-199**. For the older Data Monitor refer to **Operator's Manual 381333-143**.





## Communication Address Form

| Row No. | Name of ATS or PM | Location of ATS or PM | ATS Serial Number | ATS Catalog Number | ATS Amps | ATS Volts | Address set in ATS Controller* | Address set in Power Manager** (if provided) |
|---------|-------------------|-----------------------|-------------------|--------------------|----------|-----------|--------------------------------|--|
| 33      |                   |                       |                   |                    |          |           |                                |  |
| 34      |                   |                       |                   |                    |          |           |                                |  |
| 35      |                   |                       |                   |                    |          |           |                                |  |
| 36      |                   |                       |                   |                    |          |           |                                |  |
| 37      |                   |                       |                   |                    |          |           |                                |  |
| 38      |                   |                       |                   |                    |          |           |                                |  |
| 39      |                   |                       |                   |                    |          |           |                                |  |
| 40      |                   |                       |                   |                    |          |           |                                |  |
| 41      |                   |                       |                   |                    |          |           |                                |  |
| 42      |                   |                       |                   |                    |          |           |                                |  |
| 43      |                   |                       |                   |                    |          |           |                                |  |
| 44      |                   |                       |                   |                    |          |           |                                |  |
| 45      |                   |                       |                   |                    |          |           |                                |  |
| 46      |                   |                       |                   |                    |          |           |                                |  |
| 47      |                   |                       |                   |                    |          |           |                                |  |
| 48      |                   |                       |                   |                    |          |           |                                |  |

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|---------|-------------------|-----------------------|-------------------|--------------------|----------|-----------|--------------------------------|--|
| 49      |                   |                       |                   |                    |          |           |                                |  |
| 50      |                   |                       |                   |                    |          |           |                                |  |
| 51      |                   |                       |                   |                    |          |           |                                |  |
| 52      |                   |                       |                   |                    |          |           |                                |  |
| 53      |                   |                       |                   |                    |          |           |                                |  |
| 54      |                   |                       |                   |                    |          |           |                                |  |
| 55      |                   |                       |                   |                    |          |           |                                |  |
| 56      |                   |                       |                   |                    |          |           |                                |  |
| 57      |                   |                       |                   |                    |          |           |                                |  |
| 58      |                   |                       |                   |                    |          |           |                                |  |
| 59      |                   |                       |                   |                    |          |           |                                |  |
| 60      |                   |                       |                   |                    |          |           |                                |  |
| 61      |                   |                       |                   |                    |          |           |                                |  |
| 62      |                   |                       |                   |                    |          |           |                                |  |
| 63      |                   |                       |                   |                    |          |           |                                |  |
| 64      |                   |                       |                   |                    |          |           |                                |  |

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